



## COUNCIL REPORT

Report Date: April 9, 2024  
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Meeting Date: May 8, 2024  
[Submit comments to Council](#)

TO: Standing Committee on Policy and Strategic Priorities

FROM: General Manager of Engineering Services and General Manager of Parks and Recreation

SUBJECT: Imagine West End Waterfront Parks, Beaches, and Transportation Vision

### Recommendations

- A. THAT Council approve the Imagine West End Waterfront Vision, as outlined in this report and attached as Appendix A, as a guide for the renewal and upgrading of the West End waterfront over the next 30+ years as part of the City's mid to long-term capital planning processes and funding capacity.
- B. THAT Council approve in principle the implementation of Phase 1 of the Imagine West End Waterfront Vision, subject to funding approval through the 2023-2026 Capital Mid-term Update and Park Board approval.
- C. THAT Council direct staff to pursue senior government and external funding and partnership opportunities to advance implementation of subsequent phases of the West End Waterfront Vision.

### Purpose and Executive Summary

The West End waterfront is a cherished place of meeting, gathering, and social vibrancy for local residents and visitors from the region and around the world. It is one of the assets of Vancouver that makes the city unique and wonderful.

The Imagine West End Waterfront Parks, Beaches, and Transportation Vision (the "Vision") is a long-term vision for the area's parks, beaches and transportation network. It aims to address the pressures facing the West End waterfront, which include climate change, ever-increasing visitation, and the need to provide services for a West End population that will continue to grow substantially over the next 30 years. It is organized into phases beginning with Phase 1, for which there is some implementation funding in the City's 2023-2026 capital plan.

The Vision considers a host of diverse aspects, including access, connectivity, mobility and on-site accessibility for people travelling to and through the area; approaches to climate adaptation; and infrastructure upgrades. Woven throughout is the City's commitment to Truth and Reconciliation with xwməθkwəy'əm (Musqueam), Skwxwú7mesh (Squamish) and səlilwətał (Tsleil-Waututh) Nations ("the local First Nations") and the stewardship of spaces under the City's jurisdiction and care.

### **Council Authority/Previous Decisions**

In 2012, Council approved [Transportation 2040](#) which provides policies and actions to achieve key transportation modal, emissions and safety targets.

In 2013, Council approved the [West End Community Plan](#) which included a Public Benefits Strategy and identified priorities for the West End Waterfront including improvements to transportation, parks and open space.

In 2019, Council declared a climate emergency and subsequently approved the [Climate Emergency Action Plan](#) in 2020 to reduce Vancouver's emissions by 50%.

### **City Manager's Comments**

The City Manager concurs with the foregoing recommendations.

### **Context and Background**

#### Project Structure

The Vision is a joint initiative between the Park Board and the City of Vancouver to provide a consistent planning and design approach to the implementation of improvements outlined in the West End Community Plan and other parks, public space and sustainability aspects.

This joint project structure enabled an integrated planning approach for the connected parks and transportation assets within the study area. The Park Board/City project team was complemented by a consultant team led by Vancouver planning, urban design and landscape architecture firm PFS Studio, and included expertise in architecture, Indigenous heritage and culture, transportation, coastal engineering and climate adaptation.



## Project Area

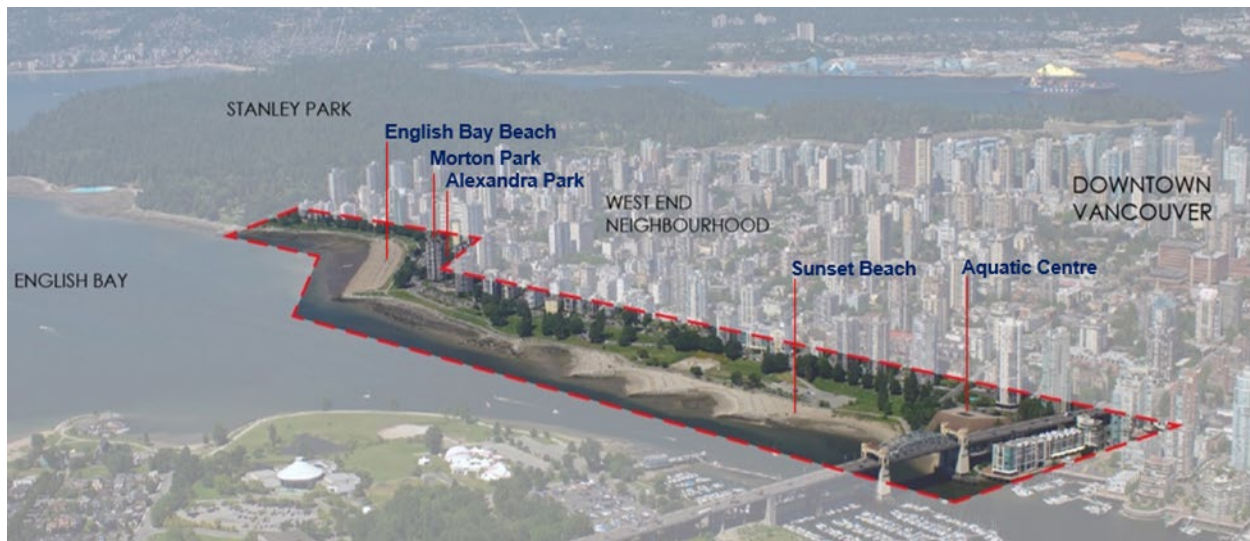


Figure 1: Imagine West End Waterfront Project Scope

The project's approximately 38-hectare (94 acre) site spans from the Burrard Bridge to the entrance to Stanley Park, including Sunset Beach Park, English Bay Beach Park, Alexandra Park, and Morton Park, as well as the transportation network including Beach Avenue and the Seaside Greenway along the Seawall. Private property is not included in the project scope.

## **Discussion**

The West End Public Benefits Strategy (2013) identified the need to renew and upgrade English Bay and Sunset Beach Parks as a core element for parks and public open spaces. It also noted to explore opportunities to create new public open space at Morton Park and to enhance and expand the network for walking, cycling and transit.

The Vision will help address impacts from climate change and sea level rise, support ecological revitalization, plan for sustainable transportation and improved accessibility, and create a vibrant and welcoming waterfront that can be used by all for the next 30 years and beyond. As the Vision is implemented over the long-term, interim changes including re-routing of transit, relocation of bus stops and reopening the waterfront cycling path could take place to support construction and future design of the area.

Three rounds of public engagement were undertaken (summarized in Appendix B), in addition to extensive direct engagement with stakeholders and equity denied groups. Engagement with the local First Nations occurred through the inter-governmental referral process, as well as an invitation for collaboration sent to all three Nations at the beginning of the project. Tsleil-Waututh Nation accepted this invitation and provided significant input into the process.

## Vision Overview

The Vision is divided into five general character areas illustrated in Figure 2 and summarized below. Detailed descriptions and drawings are found in the Vision document (Appendix A).



Figure 2: Vision Character Areas

1. **The Wooded Foreshore** (between entrance to Stanley Park and Gilford Street)  
The design aims to preserve and heighten the existing quiet, intimate nature of the waterfront west of Denman Street. Design elements and opportunities include:
  - Reintroducing two-way vehicular traffic west of Denman Street;
  - Exploring opportunities with TransLink to extend transit into Stanley Park;
  - Retaining a separated cycling path along Beach Avenue with widths comparable to the existing on-street interim facility;
  - Relocating the sidewalk in this area to south of the street trees on Beach Avenue to accommodate a cycling path and to ensure retention of the existing street trees; and
  - Viewing deck on an elevated walkway.
  
2. **The Beach, Park, and Plaza at English Bay** (Gilford Street to Bidwell Street)  
English Bay will continue to be a very active area, with beach use and multiple activities converging at Denman and Davie Streets. Design elements and opportunities include:
  - Reallocating road space for new permanent public space at Morton Park by realigning Beach Avenue to tie into the intersection of Denman and Davie Streets; and
  - Better support for special events such as the Celebration of Light, New Year Polar Bear Swim, and other existing events, with increased capacity for future events.
  
3. **Tidal Meadows** (Bidwell Street to Broughton Street)  
This area stresses ecological rehabilitation with smaller more intimate gathering and interpretive spaces. Design elements and opportunities include:
  - Raising the park and beach areas which will cover the existing vertical wall (see Appendix A for reconfigured Seaside Greenway path) creating a gentler slope down to the water that is more resilient to wave action; and
  - Keeping the 'Engagement' sculpture and the AIDS Memorial in their existing locations.

#### 4. **Sunset Beach (Broughton Street to Bute Street)**

Sunset Beach is expected to see increasing levels of activity and use over the coming decades. To accommodate this increase and enhance existing popular amenities, this area is envisioned as highly programmed. Design elements and opportunities include:

- A separated pedestrian and cycling path through the park connecting from the Bute Street Greenway to the Seaside Greenway;
- Extending the protected bike lanes on Pacific Street from Broughton Street to Thurlow Street to close the gap in the cycling network;
- A destination playground for children and youth; and
- A new Amphitheatre and ‘Great Lawn’ for larger events and performances.

#### 5. **Burrard Bridge Area and Renewed Vancouver Aquatic Centre**

Much of the design of this area is dependent on the ongoing separate planning process for the renewal of the Vancouver Aquatic Centre (VAC). The area under and adjacent to the Burrard Bridge is intended to be a neighbourhood scaled ‘gateway’ to the waterfront. Through coordination with the VAC project, the design elements and opportunities include:

- Creating opportunities with TransLink to provide two-way transit service on Pacific Street to connect with services along Burrard Street and improve transit legibility; and
- Exploring opportunities for an elevated separated pedestrian and cycling path connecting the Bute Street Greenway to the existing Seaside Greenway to the east.

### Vision Implementation Framework



Figure 3: Implementation Phasing Strategy

The Vision will be implemented through multiple phases over the next 30 years and beyond. The proposed phasing strategy (shown in Figure 3) considers several strategic priorities for implementation:

- Early delivery of projects that expand parks space and improve mobility for all modes of transportation;
- Sea level rise mitigation and climate change adaptation;
- Provision of additional services, facilities and programs;
- Attention to revenue-generating assets through design and construction, both in minimizing down time or looking for ways to grow business revenues; and
- Enabling work for subsequent phases.

The implementation strategy follows the City's capital planning framework and is subject to funding capacity.

### Phase 1 Implementation

Pending Park Board and Council approval of the Vision and subject to confirmation of Phase 1 funding as part of the 2023-2026 Capital Plan Mid Term Update (MTU), the detailed design process for Phase 1 (Morton Park Plaza and Beach Avenue west of Denman Street) will commence in collaboration with the Park Board.

Phase 1 will deliver a highly visible component of the Vision where the commercial edge of the West End meets the beach, supporting the local economy and the high number of visitors and tour buses who flock to this area year-round. This phase addresses the immediate need to increase and improve park space by transforming Morton Park into a greener and more contiguous park space and includes:

- Consolidation of Morton Park with English Bay Beach Park, creating a continuous park and plaza experience that is no longer interrupted by Beach Avenue;
- Realignment of Beach Avenue north of Morton Park, and modifications to the intersection of Davie and Denman Streets; and
- Reintroduction of two-way vehicular traffic and introduction of a permanent All Ages and Abilities (AAA) bike lane on Beach Avenue west of Denman Street.

Phase 1 also includes interim bike lane upgrades eastbound on Pacific Street between Jervis Street to Thurlow Street to fill a gap in the cycling network.

Staff will report back to Council for decision to contract award for detailed design and/or construction services, subject to contract value. Construction can start in 2026 and staff are looking at phasing the work, including reintroducing two-way traffic on Beach into Stanley Park prior to full construction.

### Subsequent Phases

Over the next 10 years, Phase 2 includes raising and expanding the headland as a first necessary step to enable the raising and extension of English Bay beach in subsequent phases. A new Welcome Pavilion and an interactive water feature adds washroom, change rooms and a new commercial opportunity for beach users.

Over the long term, Phases 3 to 7 are implemented as needed to adjust to unforeseen circumstances such as damage from severe weather, third-party projects, and special events. These phases can be implemented separately and in a different order as new priorities arise.

**Financial Implications**

The cost to prepare the West End Waterfront Vision is approximately \$3.5 million.

The Class D order of magnitude cost (2023 \$) to implement the full vision is estimated to be approximately \$300 million, of which ~25% would be considered renewal of existing infrastructure and ~75% would be considered new/expanded/upgraded infrastructure to serve population growth. Renewal is primarily funded from property tax while new and expansion is primarily funded from development contributions.

The Class D order of magnitude cost (2023 \$) to implement Phase 1 is estimated to be approximately \$16 million, of which ~15% would be considered renewal of existing infrastructure and ~85% would be considered new/expanded/upgraded infrastructure to serve population growth. The 2023-2026 Capital Plan contemplates \$10 million for implementation of Phase 1. Funding options will be brought forward for Council consideration as part of the 2023-2026 Capital Plan Mid-term Update in July 2024.

Implementation of subsequent phases of the Vision will be considered as part of the City’s mid to long-term capital planning processes (10-year Capital Strategic Outlook and 4-year Capital Plan) subject to funding capacity, and integrated into the implementation of the West End Community Plan and Public Benefits Strategy. External funding and partnership opportunities will be explored, including senior government funding programs targeted for climate change adaptation/resilience.

**Legal Implications**

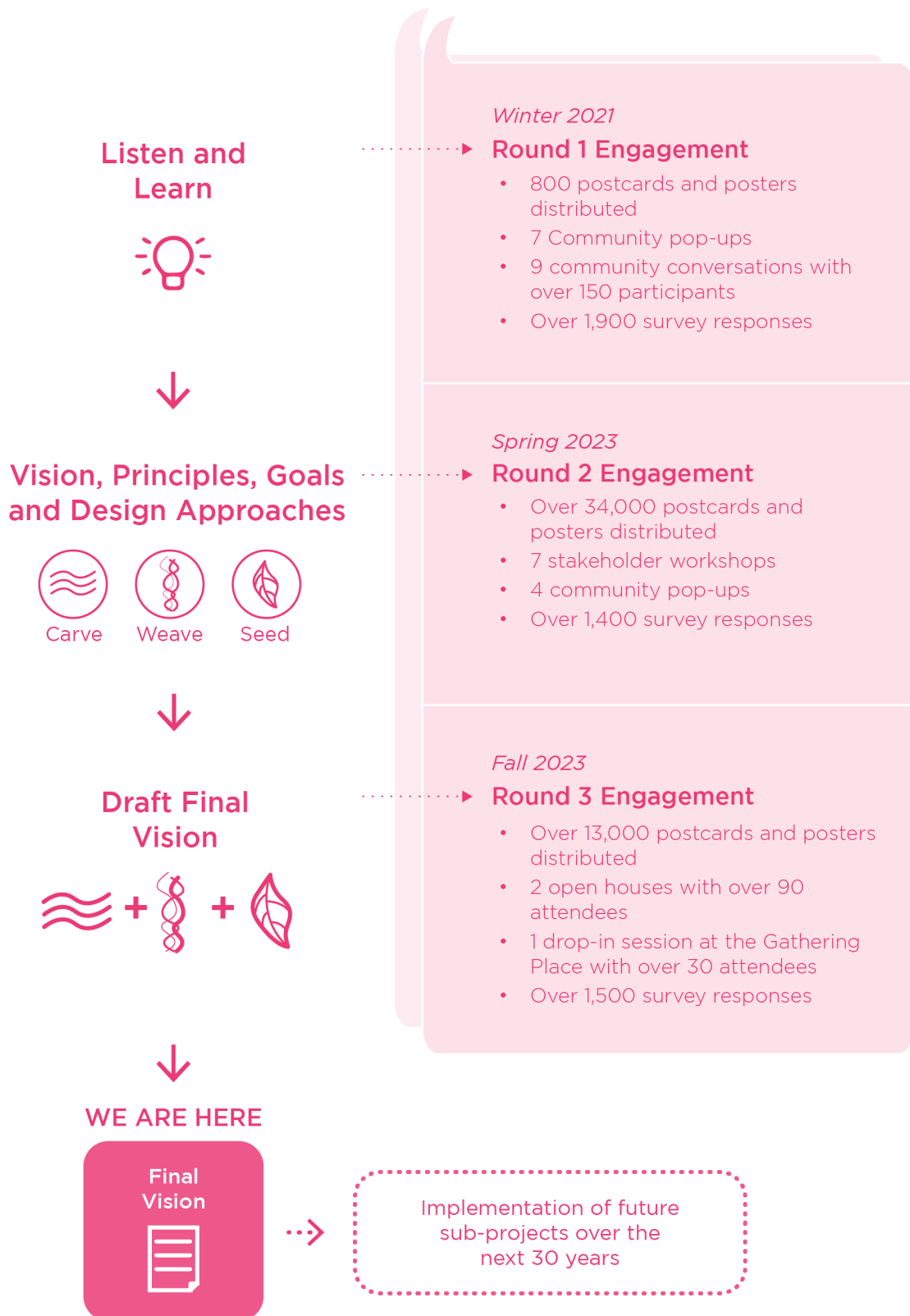
There are no legal implications associated with this report.

\* \* \* \* \*

**APPENDIX A**  
**Imagine West End Waterfront Vision**

**(see attached)**

## APPENDIX B Planning Process and Engagement Summary





# APPENDIX A

# Imagine West End Waterfront

*Vision*

April 2024







The West End waterfront site viewed from Burrard Bridge. (Image by Mandy Yu)



# Since Time Out of Mind

The West End waterfront parks and Beach Avenue project site sits within the traditional, ancestral and unceded territories of the Coast Salish peoples: the xʷməθkʷəy̓əm (Musqueam) Indian Band, Skwxwú7mesh Úxwumixw (Squamish Nation), and səilwətaʔ (Tseil-Waututh) Nation who have regarded this site as a significant place of gathering from time immemorial. This was a place of bounty, used for harvesting food and resources, welcoming visitors and friends, and holding ceremonial gatherings. These lands continue to be the foundation of thousands of years of living Musqueam, Squamish, and Tseil-Waututh culture.

# Acknowledgments

The *Imagine West End Waterfront Vision Plan* and its supporting documents were a cumulative and collaborative effort by the consultant team, staff at the Vancouver Park Board and City of Vancouver, and the Community Advisory Committee. The team would like to offer thanks to the xʷməθkʷəy̓əm (Musqueam) Indian Band, Skwxwú7mesh Úxwumixw (Squamish Nation) and səliłwətaʔ (Tsleil-Waututh) Nation for their review, feedback and guidance. Thank you to all project stakeholders and the public for taking the time to shape the future of the West End Waterfront for everyone to enjoy.

## Published May 2024

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**Sky Spirit Studio** [ Heritage Consulting and Cultural Advisor ]  
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**Argyle** [ Phase 2 / 3 Public Engagement and Communications ]

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**Diamond Head Consulting** [ Terrestrial Habitat Restoration ]  
**Northwest Hydraulic Consultants** [ Coastal / Marine Engineering ]  
**Inlailawatash** [ Archaeology and Heritage ]  
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Paige Campbell	Steven Neill
Valerie Cormier	Mahsa Rezaei
Nico Ford	Laurie Sallis
Daniela Gardea	Anonymous at Request
Scott Harrison	of Member



### xʷməθkʷəy̓əm (Musqueam) Indian Band

“We are traditional hən’q’əmin’əm’ speaking people and have descended from the cultural group known as the Coast Salish. Our people moved throughout our traditional territory for thousands of years using the resources the land provided for fishing, hunting, trapping and gathering, to maintain their livelihood. Today, we still use these resources for economical and traditional purpose. Although a metropolitan city has developed in the heart of Musqueam territory, our community maintains strong cultural and traditional beliefs. Our community historians and educators teach and pass on our history to our people, which has always been the way of our people, to keep our culture and traditions strong. Today our population flourishes and we are a strong community of over thousand members. We live on a very small portion of our traditional territory, known as the Musqueam Indian Reserve, located south of Marine Drive near the mouth of the Fraser River.”



### Sḵwxwú7mesh Úxwumixw (Squamish Nation)

“The Squamish Nation is comprised of descendants of the Coast Salish Aboriginal peoples who lived in the present day Greater Vancouver area; Gibson’s landing and Squamish River watershed. The Squamish Nation is a vibrant and dynamic Coast Salish Nation, with a strong culture, rich history and bright future. The Squamish nation has existed and prospered within our traditional territory since time immemorial. We are Coast Salish people. Our language is the Squamish language. Our society is, and always has been, organized and sophisticated, with complex laws and rules governing all forms of social relations, economic rights, and relations with other First Nations. We have never ceded or surrendered title to our lands, rights to our resources, or the power to make decisions within our territory.”



### səlilwətał (Tsleil-Waututh) Nation

“We are the Tsleil-Waututh Nation, “People of the Inlet.” According to archaeological evidence and our oral history, Tsleil-Waututh people have lived in this traditional territory for thousands of years. Burrard Inlet sustains us with food, a place to live, spectacular natural beauty. Our ancestors traveled throughout the territory, keeping villages in different locations to live wherever seasonal resources were plentiful. Our lands and waters have shaped our culture and will be central to our way of life for generations to come. We will continue to put the face of the Tsleil-Waututh Nation back on our traditional territory, build capacity within our community, and participate on all levels, social, ecological, cultural, economic, in decision making within our lands.”

**We raise our hands to Musqueam, Squamish, and Tsleil-Waututh staff and community members who have collaborated on the plan to advance Host Nations’ visibility and voice on these lands, and extend respects to ancestors and Elders, past, present, and emerging and land and water kin.**



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# Vision Summary

*Imagine West End Waterfront* aims to recognize and enrich what has been (and is) so loved about this particular place: the waterfront's soft beaches, sweeping perspectives, rich ecologies, interlinked gathering places, community-based activities, and global events. From time immemorial the waterfront has been a place of great significance to the x̣ṃəθḳ'əỵəm (Musqueam), Sḳẉx̣ẉú7mesh Úx̣ẉumix̣w (Squamish), and səliłwətał (Tsleil-Waututh) Nations. The project works to center Coast Salish values and cultural expression, while deepening the understanding of what it means to decolonize planning and design processes.

The project, known as *Imagine West End Waterfront*, is led by the Vancouver Board of Parks and Recreation in partnership with the City of Vancouver. The three-year planning process has yielded a multi-disciplinary Vision Plan document for phased development along the waterfront to the year 2050 and beyond, an illustrative plan, and a set of Design Guidelines. Supporting documents include a Site Assessment and Analysis, Issues and Opportunities Report, (confidential) Story of Place Report, Engagement Summary, Metocean and Geomorphology Reports, Transportation Plan, Stormwater Management Assessment, Public Art and Monument Inventory, Preliminary Arborist Report, Lighting Analysis, and Archaeological Overview Assessment.

The planning and design process has been a truly relational one with three workshops with Sky Spirit Studio on decolonizing design and centring Coast Salish culture, two design charettes with Sky Spirit Studio, as well as an integrated, collaborative and iterative design process within the consultant team, and with the Park Board and City of Vancouver. Park Board protocols for consulting with the local First Nations were followed, and recommendations were incorporated into the design and discussed. Sky Spirit Studio also incorporated knowledge and wisdom from multiple intergenerational x̣ṃəθḳ'əỵəm (Musqueam), Sḳẉx̣ẉú7mesh Úx̣ẉumix̣w (Squamish), and səliłwətał (Tsleil-Waututh) voices within the project's "Story of Place" document including Knowledge Keepers, elders, youth, carvers, weavers, and Two Spirit folks of all ages. Three phases of public engagement were conducted, with multiple strategies that included door

to door meet and greets, a dedicated Community Advisory Group, public pop ups, open houses, and a love letter writing campaign.

The project site includes English Bay Beach Park, Sunset Beach Park, Morton Park, Alexandra Park, Beach Avenue, Pacific Street, and the associated street networks from Stanley Park to Burrard Bridge. Park identity and public life, climate change and sea level rise, equity and inclusion, Reconciliation and decolonization, ecological restoration, connectivity and accessibility, and upgraded facilities and infrastructure were major drivers of the design. Sea level rise and coastal squeeze threaten to impact the park in addition to increasing usership, failing and outdated infrastructure and buildings, and degraded ecologies.

The project aims to create a highly embedded and iconic sense of place, deeply rooted with Coast Salish values and cultural expression (in consultation with the local First Nations), while redesigning areas for increased resilience, habitat function, and biodiversity, as well as enriched park experiences. The West End waterfront will continue to play a key role in supporting a thriving local economy, and as a world-class outdoor destination for tourism. The plan has been developed with this as a key consideration that will be carried forward through detailed design and implementation of future sub-phases.

A vision statement with principles and goals were developed for the project that embodied the emotional and atmospheric qualities of the waterfront. The vision statement is: *A welcoming place of softness, joy and connection.*

Three design schemes were developed which, after public consultation, discussions with the Park Board and City, and further engagement inputs, were folded into one final design. In the final plan, nature-based approaches to sea level rise help extend upland and intertidal areas to ensure resilience to increasing sea levels and storm surge, and active park uses are clustered in order to ensure meaningfully intact Pacific coastal, meadow, riparian, intertidal, and subtidal ecologies can be sustained.

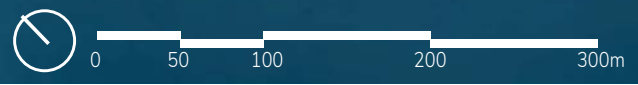
The English Bay and Sunset Beaches are raised and extended to ensure future use of these beloved spaces, and the seawalls are covered with more gently graded slopes to merge upland and intertidal ecologies, to withstand storm surge, and enable ecologies to migrate naturally upland with sea level rise over time. Woodland, meadow, freshwater and upper beach riparian zones, salt marsh, eel grass meadows, mariculture, lawns, and gardens are incorporated across the park.

Highly activated zones are consolidated and clustered at Morton Park (with a new bathhouse and café, splash pad, and programmable space), a re-imagined English Bay Bathhouse (with amphitheatre seating, a washroom, lifeguard station, community space, and gardens), an extended and expanded English Bay headland (with a weather-protected, programmable plaza and terraced seating to the ocean), at the foot of Barclay Street (with a new skateboard park, adventure playground, and washroom facility), at the foot of the Bute Street Greenway (with a café, sport courts, roller plaza, food and beverage facility, Sunset Beach bathhouse, and park storage), and under the Burrard Bridge (with an expansion to the existing community garden and an expanded dog park). Additional new experiences offered throughout the park include elevated walkways and a bikeway over the riparian and intertidal zones, habitat islands for wildlife and paddling interest, terraced lounging platforms, playful floating decks, a suggested floating boat pavilion, and a sinuous upgraded primary pathway that passes through a variety of landscapes such as woodland, meadow, riparian swales, dunes, and gathering spaces of many scales and types.

The plan will be developed in phases to 2050 and beyond, according to capital budget cycles and Park Board and City goals. These goals currently include: mitigating sea level rise and effects of climate change with related biodiversity and habitat improvements; advancing Reconciliation and decolonization; garnering revenue generation opportunities to support future phases and their maintenance and operations; and program delivery for activation and recreational use (new and existing).



GENERAL LOCATION OF  
NEW VANCOUVER AQUATIC  
CENTRE AND PARKING  
(Design of this area subject to  
change pending final location)









# 1.0 INTRODUCTION

# 1.1 Overview

## Purpose of the Plan

*Imagine West End Waterfront* offers a long term conceptual plan for the West End waterfront to 2050 and beyond; a set of principles, directives, and design impressions that are meant to center x̣ṃəθḳʷəỵəm (Musqueam), Sḳwx̣ẉú7mesh Úxwumixw (Squamish), and səilwətaʔ (Tsleil-Waututh) culture, while shaping the physical future of Vancouver’s beloved West End waterfront as it experiences climate change and sea level rise, coastal squeeze ,and increased demand. The Vision Plan outlines a planning and design approach for the implementation of improvements to the multiple existing West End waterfront parks as well as their associated street networks to the year 2050 and beyond. The purpose of this report is to provide a flexible yet consistent vision for the future of the West End waterfront, while providing a framework for decision-making, design, and implementation.

The ideas and strategies described herein will undoubtedly require continued discussion and review at the municipal, provincial, and federal levels, as well as with the local First Nations, but the framework offers a solid basis for moving forward. This is a collaborative plan developed by both the Vancouver Park Board’s Planning and Park Development group and the City of Vancouver’s Transportation Planning Branch in Engineering Services, that recognizes the complex relationship between streets and public spaces. This integrated approach should be continued as project works are undertaken along the waterfront. The Vision Plan is the first step in beginning the process of design that will transform the site into a renewed cultural and ecological landmark of continued international significance and relevance.

## How to Use This Document

The Vision Plan is intended to be read in conjunction with the Design Guidelines. Together they provide a design framework that ensures the project Vision, Principles, and Goals developed through the planning process are carried through the next thirty years of waterfront transformation. Prior to implementation of each phase, a detailed design phase will be necessary to further develop design and costing accuracy.

The Vision Plan does not negate the need for continued consultation with local First Nations or for designers to review relevant and up to date Park Board and City publications and to use their professional expertise to design robust, safe, functional, and contextual parks and streets. The Vision Plan emerges from several technical reports developed for this project including the Stormwater Management Assessment; Metocean Assessment; Geomorphological Assessment; Intertidal Environmental Report; Upland Environmental Assessment; Site Lighting Analysis; Public Art and Monuments Inventory; Transportation Assessment; and appropriate, relevant, and approved sections of the Story of Place document if approved by Sky Spirit Studio. Please note that the Story of Place document is not a public facing document and is the property of Sky Spirit Studio, shared through relationship with the project team.

The Vision Plan addresses the following topics:

- 1.0 Introduction** - Introduces the project process and framework.
- 2.0 Issues and Opportunities** - A summary of the background data collection and research process that informed the resultant design.
- 3.0 Design Summary** - An overview of the design process and the proposed vision for the site, including an illustrative plan and images.
- 4.0 Plan Components** - More detailed explanations of specific topics and how they are addressed in the overall Vision Plan.
- 5.0 Implementation** - Sets out proposed implementation phases and high level cost implications.
- 6.0 Appendices** - Additional documents that provide further in-depth information to support the Vision Plan.

# 1.2 Project Area

The West End waterfront project area includes the beaches and parks from Park Lane near Stanley Park to and including the underside of Burrard Bridge; as well as Beach Avenue and Pacific Street and their associated street networks. The overall project site is approximately 38.5 hectares (95 acres) and includes:

- 1 English Bay Park
  - 2 Sunset Beach Park
  - 3 Morton Park
  - 4 Alexandra Park
- Beach Avenue, Pacific Street, and their associated street networks

The West End waterfront project area sits within the traditional, ancestral, and unceded territories of the x̣ṃəθḳʷəỵəm (Musqueam) Indian Band, Sḳwx̣ẉú7mesh Úxwumixw (Squamish Nation), and səilwətaʔ (Tsleil-Waututh) Nation.

It is acknowledged that the tools and drawings used in this project continue to flatten site complexity and reference boundaries that reinforce a colonial world order imposed upon the site, and much work needs to be done to continue to build relationships and earn trust with the local First Nations, and to reevaluate how the tools used in the planning process may be applied to do so in a way that does not continue to perpetuate colonial erasure and harm.





# 1.3 Past, Present, and Future

The West End waterfront has always been a beloved gathering place, both locally and globally. For millennia its soft beaches, rich intertidal zones, forests, trail systems, and connection to the Salish Sea have made it both an abundant place to live and a welcoming place to visit. This rich abundance brought people together in this place for everyday harvesting, socializing, and cultural production, as well as special events of political protocol and grand celebration. Coast Salish people have a traditional saying:

“When the tide is out, the table is set”  
Carleen Thomas, Tsleil-Waututh Nation, Burrard Inlet Action Plan

Today, Vancouver’s West End waterfront is world renowned and is one of the most popular and highly-visited public spaces in the city. Its iconic parks and beaches help define the Vancouver experience and are a prime attractor to the city’s more than nine million global visitors each year. As an international tourist destination, the West End waterfront is known for its natural beauty, diverse communities, vibrant culture, and wide range of year-round outdoor activities. A continuous seaside pathway, expansive beaches, and grand views of English Bay, the Salish Sea, and Vancouver Island beyond continue its legacy as a place of welcoming and abundance.

This place continues to be a place of great regional importance to the x̣m̄əθk̄əȳəm (Musqueam), Sk̄wx̄w̄ú7mesh Úxwumixw (Squamish), and səliłwətał (Tsleil-Waututh) Nations. *Imagine West End Waterfront* is rooted in Coast Salish ways of knowing, and aims to maintain and enrich what has been (and is) so loved by all about this place: its rich ecologies, soft beaches, expansive views, interlinked gathering places, and its community-based activities and global events.



Joe Fortes swimming in English Bay, 1913.  
(Vancouver Public Library Historical Photograph Collections)



English Bay Beach



(© Adobe Stock)



(Image by Amanda Siebert)



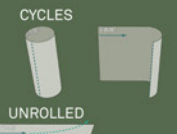
IMAGINE WEST  
END WATERFRONT

# LIVING CALENDAR

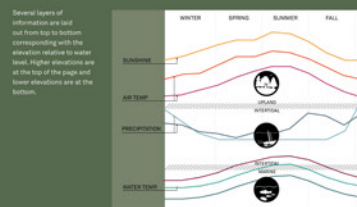
This "living calendar" reveals the West End Waterfront's interplay of interwoven systems: natural and constructed, active and passive, human and non-human. It illustrates the temporal, spatial, and organic nature of this place. The word "living" addresses the living beings within this place that have their own rhythms and cycles, as well as the idea of transformation over time, as the site sees new life, new design, and new cycles integrated with what exists.

## HOW TO READ THIS DRAWING

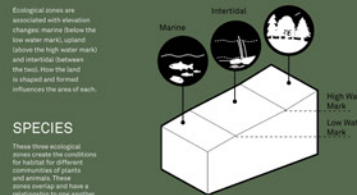
This drawing supports the idea that time is cyclical rather than linear. It encompasses existing ecological, social and cultural activity, but it also holds space for the future of development, and the future of emergency. It can be unrolled and viewed to reveal the seasonal cycles of the site.



## STRUCTURE



## ECOLOGICAL ZONES



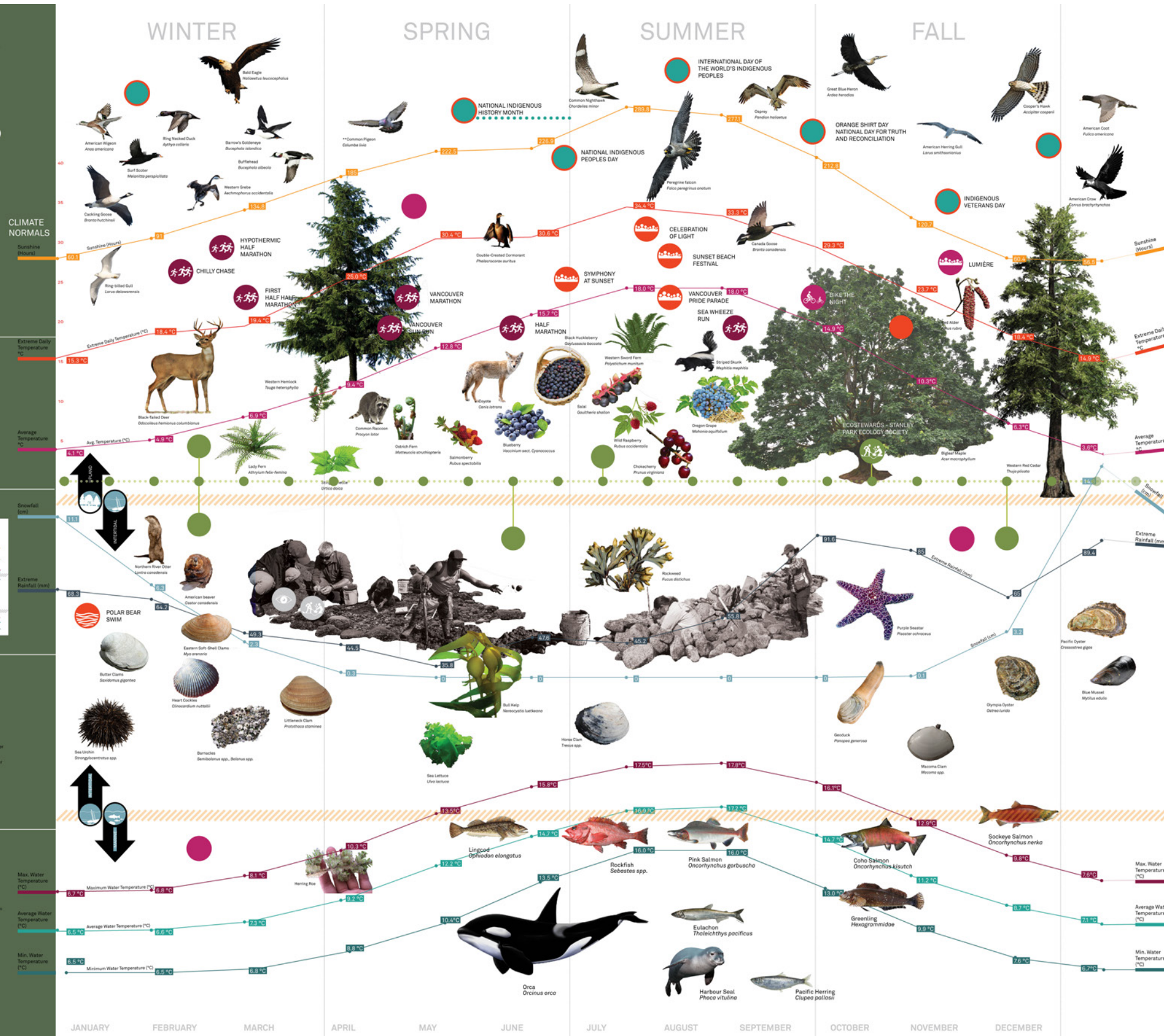
## SPECIES

These three ecological zones are interconnected with various species. The diagram shows how species are distributed across the zones based on their needs for different environmental conditions.

## THEMES



## ACTIVITIES



The Living Calendar interweaves past, present and future subtidal, intertidal, and upland; human and nature; and programmed events and natural processes for a vision of a more relational waterfront future.

A full-size version of the calendar is available at <https://www.shapeyourcity.ca/west-end-waterfront>



# 1.4 Project Considerations

## Truth and Reconciliation

The xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh Úxwumixw (Squamish), and səliwətaʔ (Tsleil-Waututh) peoples have appreciated and understood the value of this area for thousands of years. With uninterrupted access to their land, they created a deep familiarity with surrounding ecosystems, developing intuitive and technical methods for monitoring its health and vitality. They were able to sustain themselves, celebrate their culture, and ensure the sustainability of the lands for future generations. Through colonial settlement of the Lower Mainland region over the past 200 years, local First Nation's access to their lands was disrupted, diminishing their ability to thrive as a community, practice their culture, and sustain their people.

The Vision Plan aims to center Coast Salish values and cultural expression in acknowledgement that this land is part of the unceded territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh Úxwumixw (Squamish), and səliwətaʔ (Tsleil-Waututh) peoples.



Gathering of Canoes along the Vancouver coastline.

## Climate Change and Resilience

Based on sea level rise observations and computer modelling as well as projected natural land subsidence in the West End, projected sea level rise along the West End waterfront is 0.6 m by 2050, 1.2 m by the year 2100, and 2.4 m by 2200. In addition, climate change is resulting in increased frequency and intensity of storms with larger and more powerful storm surge and wave run up. As sea levels rise, coastal squeeze results in less waterfront park space overall. Climate change is also causing hotter, drier summers and increased storm intensity in winter and spring. Summer heat and drought will continue to impact vegetation and intertidal life, and more frequent and intense rainfall will bring more potential for flooding and erosion.

Using nature-based approaches to climate adaptation, the Vision Plan aims to protect valuable park space, infrastructure, and habitat from rising sea levels, extreme heat events, and intensified rainwater runoff.



Storm-related flooding at Sunset Beach.

## Habitat Restoration and Ecological Integrity

Settler impacts to the waterfront have resulted in a net loss of habitat and biodiversity. Sea level rise and extreme heat events are negatively impacting life in the intertidal zone - the critical interface between terrestrial and marine ecosystems. Intertidal zones are important feeding sources for both migratory and resident birds, small mammals and a diversity of fish, crustaceans, and invertebrates. The seawall disconnected and isolated upland forest, riparian, and foreshore ecologies, and the picturesque tradition of rolling lawn with isolated trees patches became the dominant park expression. In addition, urban stormwater runoff has negatively affected water quality and ultimately, foreshore integrity.

The Vision Plan establishes more robust and interconnected upland, riparian, and foreshore ecologies for both human and non-human uses.



(© Adobe Stock)

Eelgrass bed.



## Park Identity and Functionality

This has always been a place of softness, protection, gathering, and abundance. The innate softness of the sand, the sweeping atmospheric views, the shelter of the bay, and the merging of coastal hemlock forest with rich riparian and intertidal ecologies made this a place of gathering and refuge.

The West End waterfront continues to be a premier destination for those in search of respite and connection to nature and the ocean. The waterfront needs to function for both larger events and crowds, while still maintaining its ecological function and soft sense of refuge. The Vision Plan establishes a pattern of high and low intensity use areas across the site to provide a flexible and diverse array of spaces for events and everyday activities. These spaces are designed for flexibility, resilience, connectivity, and accessibility for people of all ages and abilities.



Sunset Beach Park viewed from Burrard Bridge.

## Connectivity

English Bay Beach and Sunset Beach Park are two of Vancouver's most popular destinations for residents and visitors. As tourism increases and as the city and region grow over the next 30 years, more people are expected to come to the West End waterfront increasing pressures and demands on the parks and transportation network.

Providing efficient and sustainable transportation is needed to ensure everyone can access the area. The Vision Plan aims to improve access, mobility, and on-site accessibility for people of all ages and abilities travelling to and through the West End Waterfront, including at major gateways to the area, within the parks and beaches, and along Beach Avenue and Pacific Street. The Plan aims to improve connectivity by retaining the separated Seaside Greenway walking and cycling paths along Beach Avenue, realigning the intersection at Denman and Davie Streets, providing two-way transit service on Pacific Street, extending protected bike lanes on Pacific Street to address the gap in the cycling network, creating pedestrian centric streetscape design with increased crosswalks, and creating two canoe landings for non-motorized watercraft at Sunset and English Bay Beaches.



Beach Avenue transportation corridor.

## Facilities and Infrastructure

As the West End population and overall park usership increases, there is a strong need to upgrade, replace, or reconsider various services, facilities, and infrastructure in the park. A significant amount of infrastructure and many facilities along the waterfront are aging and maintenance costs are becoming prohibitive. The Vision Plan establishes a framework for much-needed new food and beverage facilities; upgraded, gender inclusive, and accessible washroom, changing, and lifeguard facilities; a structurally-adapted English Bay Bathhouse and Haywood Bandstand; a stronger interface with the future Vancouver Aquatic Centre; updated utility lines and connections; daylighted stormwater green infrastructure; and a lighting strategy for safety, security, and ecological responsibility. Operations and maintenance, as well as alignment with the project vision, principles, and goals, are key to the development of the services, facilities, and infrastructure of the park.



The English Bay Bathhouse.



# 1.5 Project Process

The project was co-led and directed through close collaboration between the Vancouver Park Board (VPB) and the City of Vancouver (CoV) in recognition of the complex relationship between the public realm and streets along the West End waterfront. An interdisciplinary consultant team was engaged, led by landscape architects and supported by a core team of transportation engineers, engagement specialists, and a Coast Salish cultural consultant. The core team was supported sub consultants specializing in: foreshore engineering and climate change, intertidal and upland ecology, civil engineering and stormwater, lighting, public art, and costing. The VPB and CoV established an internal project organizational structure to ensure all interested parties and departments were kept informed of project progress and were given the opportunity to review and comment on the work completed by the consultant team at key intervals.

A Project Management team, comprised of representatives from both VPB and CoV, was the primary point of contact with the consultant team, and met on a weekly basis to discuss various project elements, progress, deliverables, and administrative issues. The Project Management team was also responsible for continuous liaison with local First Nations through the referral process and government to government communication. This process was critical in guiding the design at each stage.

A regular series of meetings were also held with a Core Team comprised of representatives from multiple VPB and CoV departments. This team was tasked with providing input for the ongoing work and providing feedback on presented and completed deliverables. The Core Team was augmented with additional staff members as required to discuss and review specific topics or areas of interest. These meetings were supplemented by topic-specific sessions with staff to allow for

more technical and in-depth conversations on certain aspects of the project as required. This process allowed for a fluid and seamless flow of information and dialogue between the consultant team and staff.

The Vision Plan builds on work already completed by the Park Board, City of Vancouver and local First Nations related to climate change adaptation and coastal flood resilience, Reconciliation, arts and culture, multi-modal transportation resilience, equity and public life, economic performance, rainwater management, clean energy, access to nature, urban forestry, and biodiversity.

Policies and documents that informed the Vision Plan include:

- City of Vancouver UNDRIP Strategy (2022)
- False Creek Coastal Adaptation Plan (2021)
- Climate Emergency Action Plan (2020)
- Access to Nature (2020)
- Van Play (2018-2019)
- Van Splash (2019)
- Rain City Strategy (2019)
- MMIWG Report (2019)
- Culture Shift (2019)
- Resilient Vancouver (2019)
- Understanding our Community’s Climate Change Vulnerabilities - Community Climate Change Resilience Planning - Phase 1 Summary - səliłwətał (Tsleil-Waututh) Nation (2019)
- Making Space for Arts and Culture (2019)
- Urban Forest Strategy (2018 Update)
- Downtown Public Space Strategy (2018)
- Renewable City (2018)
- Burrard Inlet Action Plan - səliłwətał (Tsleil-Waututh) Nation (2017)
- West End Community Plan (2017)

- All Ages and Ability Cycling (2017)
- Biodiversity Strategy (2016)
- EV Ecosystem Strategy (2016)
- Healthy City Strategy (2014)
- Coastal Flood Risk Assessment (2014)
- Transportation 2040 Plan (2012)
- Climate Change Adaptation Strategy (2012)
- Economic Action Strategy (2011)
- Local Food Systems Action Plan (2021)

## 1.5.1 Timeline

Project work for the Vision Plan started in Spring 2021 and continued to completion in Spring 2024. The plan was delivered in five phases during this time ensuring a robust process that garnered abundant and diverse community and staff feedback. Project phases include:

- Phase 1:** Listen and Learn
- Phase 2:** Vision Development
- Phase 3:** Initial Concepts and Ideas
- Phase 4:** Final Concept and Draft Plan
- Phase 5:** Final Plan

The timeline below illustrates the start and finish and duration of the project phases. The work proposed in the plan will be implemented in phases until 2050 and potentially beyond.

### Project Timeline



## 1.5.2 Consultation and Community Engagement

Vancouver Park Board (VPB) and City of Vancouver (CoV) initiated government-to-government dialogue with the xʷməθkʷəy̓əm (Musqueam) Indian Band, Skwxwú7mesh Úxwumixw (Squamish Nation), and səliłwətał (Tsleil-Waututh) Nation for how the plan can support the local Nations priorities and interests, as well as rights and access to these lands and waters in the long-term. This ongoing dialogue is facilitated through the referrals process with each Nation and will continue through the detailed design and implementation process

Parallel to consultation with the local First Nations, community engagement began with the VPB and CoV asking the community for their vision for this area, what they would like to see more of, and what they would like to change and how. The project team initiated an expansive community outreach in 2021 by visiting local businesses, community hubs, parks, and public places to introduce the project, invite participation, and to distribute posters and postcards informing the community about the project.

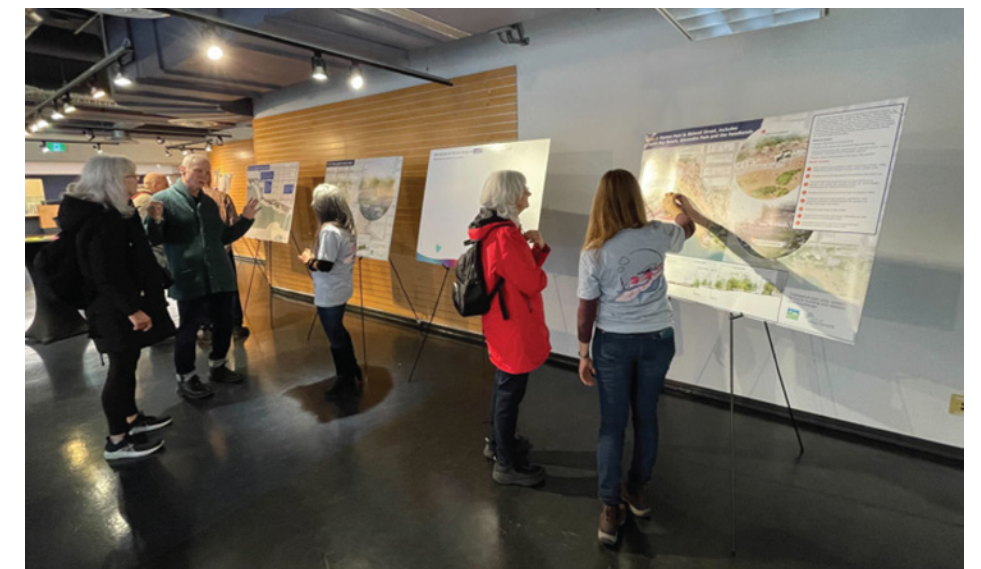
A first round of public engagement was conducted in the fall of 2021 by hosting pop-up engagement sessions at various locations within the West End, virtual stakeholder workshops, and an online survey. This early stage of community engagement coincided with challenges that the Covid-19 restriction had created and as a result, outdoor and online events became the primary methods of engaging with the community.

A Community Advisory Group (CAG) was also established at this stage. This advisory body brought together a broad range of community perspectives from West End and City of Vancouver residents, business owners, and organizations who have an interest in the area and topics the project addresses. The group represented individuals from a diversity of perspectives and experiences who care about Vancouver's West End and are interested in the plan area. The CAG provided a forum for feedback, guidance, and advice to the project team at key milestones, including providing input into the development of a project vision, design principles, and goals; as a forum for the project team to discuss ideas, issues and design concepts; and encouraging community peers to participate in the broader public engagement program.

A second round of engagement took place in 2023 and included an online survey, love letter submissions, a children and youth participatory planning / design program, multi-stakeholder workshops and meetings, virtual workshops, and pop-up engagements where the project team presented three design approaches. Members of the public were invited to mix and match their preferred aspects of the three design approaches. The preferences of the public were incorporated into the draft concept design, which was presented in the third round of engagement.

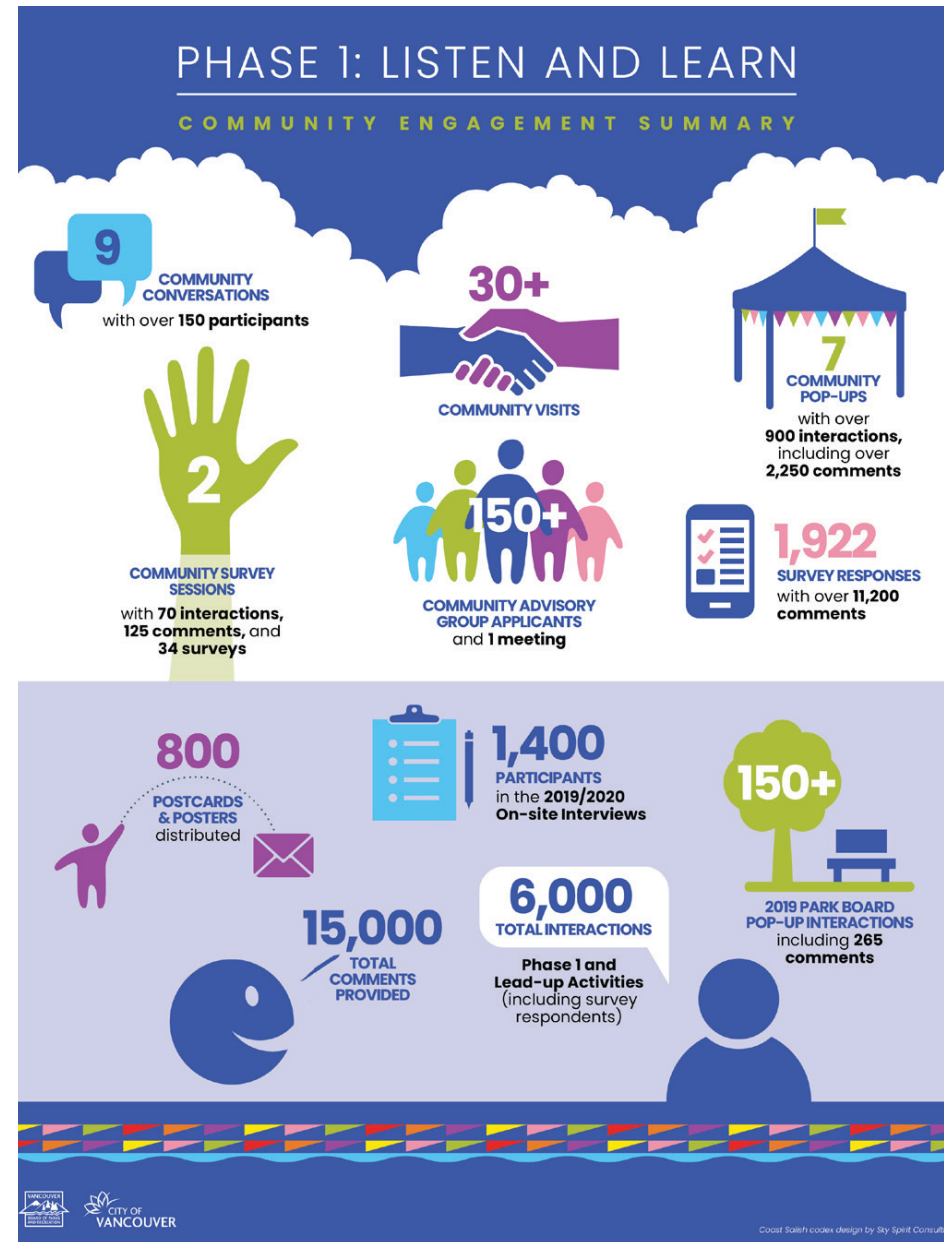
The final Vision Plan was shared with the community at this third round of engagement. This round also included an online survey that garnered over 1600 responses, as well as two in-person open houses where the Vancouver Park Board and City of Vancouver staff as well as the design team had the opportunity to engage with members of the community and discuss the design and the plan's components. The open houses took place at the Vancouver Aquatic Centre in the West End and downtown at Robson Square to provide opportunities for both West End and the wider City of Vancouver residents to engage with the process.

The findings of all these engagement events can be found in the 'What We Heard' Reports prepared for the project.





## Phase 1 Engagement Summary



## Phase 2 Engagement Summary



## Phase 3 Engagement Summary



# 1.6 Project Framework

The vision, principles and goals for the project were developed through a rigorous, iterative, and inclusive process. They helped to establish the priorities of the Vision Plan, and will continue to guide the work as project phases are implemented throughout the life of the plan.





## 1.6.1 Vision Statement

*'A welcoming place of softness,  
joy, and connection.'*

A vision statement is a description of an area's future that articulates a desired outcome - a place where project participants agree they would like to journey towards together.



People gathering at English Bay Beach.

Typically, a vision statement is one that departs from the past and present to imagine a future state, as though time is a linear process that lets go of past and present. But what has been reinforced through the process of this project, from the deep engagement with the cycles and patterns of this place, from the way people describe their memories of this place, and particularly through the learnings around Coast Salish time, is that time isn't linear. What is imagined for the future is grounded in history and is deeply inherent and present now within the site: the qualities of the waterfront, the atmosphere, the emotion - the experience of the place.

The vision statement is one that draws out the cherished aspects of this place, the qualities that we think are important to emphasize, to not erase, and to draw out in profound ways, and to interpret and enable within the current context.



Indigenous canoes near Stanley Park.

## Welcoming

The West End waterfront has been a place of welcoming for the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh Úxwumixw (Squamish), and səlilwətaʔ (Tsleil-Waututh) peoples for millennia. It has been a place of arrival by canoe and on foot, whether friends and family coming from nearby villages or from further away for large gatherings and celebrations. It is important that the waterfront be designed to center and express Musqueam, Squamish, and Tsleil-Waututh presence and culture so that Coast Salish people feel welcome on their own land.

In addition, the waterfront continues to welcome people from all over the world, and needs to provide a safe and welcoming space for urban Indigenous and people of diverse backgrounds, gender, income, and abilities. The sense of welcome is important to communicate at multiple scales, from individuals looking for places for solitude and reflection, to larger seasonal celebrations. The waterfront also welcomes an abundance of species who visit this place at various times of year - the Barrow's Goldeneye, herons, and multiple other species who create their own rhythms and rituals and need to be welcomed, hosted, and accommodated.



Pride parade celebrations.



## Softness

Since time out of mind the West End waterfront has been a place of softness. Two sand beaches were historically formed from the remarkably soft sediments of Stanley Park's cliffs at what is now called English Bay and Sunset Beach. While they have been heavily modified in recent settler history, these beach and park areas remain and the landscape around them is recognized for its physical, spatial, emotional, and experiential softness against the backdrop of the city it fronts.

The beaches merged intertidal and upland ecologies until separated by the seawall. The waterfront was also a place of profound cultural production through the carving, shaping, and weaving of soft materials. Cedar, wool, and cat tails contributed to the overall culture of softness and resilience of the waterfront.



Undefined edges of the intertidal zone.

## Joy

So many people have used the word joy in their description of their experience of the West End waterfront. Joy is emergent from a profound connection with place and community, and from the pleasures of immediate experience. Coming to the waterfront and engaging directly with the power of the ocean, its abundance, its myriad forms of life, and its constantly shifting states forms a basis for the Vision Plan. Joe Fortes embodied the joy of swimming and everyday life on the waterfront, and the grand events and celebrations, and the joy of 2SLGBTQIA+ Pride within the West End are also crucial to center within the design.



(Image by Colin Knowles)

Celebration of Light fireworks festival at English Bay.

## Connection

The ocean is a powerful connector, and we have a desire to be as close to it as we can because of its profound physiological and emotional effects. The beach holds an informality that encourages overlap and connection in multiple ways. Connecting people to each other, wildlife, and seasonal processes; reconnecting upland, riparian, intertidal, and subtidal ecologies; physically connecting the neighbourhood to the park through porous edges and pedestrian oriented intersections; connecting upland stormwater to the ocean; and finally, reconnecting to the deep history of the site are aspirations of the project.



False Creek Ferry boat heading to Granville Island.

## 1.6.2 Principles

Principles are high-level, non-negotiable values that are fundamental to both the Park Board and the City. The four project principles are:

### **Truth, Healing, & Reconciliation:**

Work with the x̣ṃəθḳẉəỵəm (Musqueam), Sḳẉx̣ẉú7mesh Úx̣ẉumix̣w (Squamish), and sə̣lilẉətaʔ (Tsleil-Waututh) Nations to center Indigenous voices and visibility on the land and water at their lead and at their pace.

### **Environmental Resilience:**

Coastal adaptation, habitat restoration and ecological revitalization within the lens of the climate emergency and social justice.

### **Equity, Wellbeing, & Pride:**

Center 2SLGBTQ+, BIPOC, and traditionally underrepresented groups.

### **Active & Sustainable Mobility:**

Movement, access, and transportation to and through the site for all ages, abilities, and modes.

## 1.6.3 Goals

The project goals are statements of intent that describe a desired future state or success. Sub-goals are statements of direction that define the path(s) to achieving the vision. The six goals, with sub-goals listed below, are:

### **A welcoming place**

- Design spaces that are emergent from the site and its multiple ecological, cultural and social layers
- Diversify opportunities for both social interaction and solitude in all seasons and at all times of day
- Establish clear and inviting physical and visual gateways to the park
- Ensure open space provisions as usership increases
- Embed universal accessibility within the site and streets to ensure equity of use

### **A joyful place**

- Increase the variety of expressions and activities throughout the site while maintaining its overall continuity
- Create places that build community through everyday familiarity, gathering, activity, and stewardship
- Create moments of surprise, delight, and play
- Diversify opportunities to engage with water

### **A transformational place**

- Create spaces that express seasonality and are dynamic and emergent over time
- Design spaces that are adaptable for a wide range of activities and can accommodate events at multiple scales
- Include healing spaces for pause, reflection, grieving, and growth
- Repurpose vehicular space for sustainable transportation and public life

### **A connected place**

- Enhance the quality of walking, rolling, and cycling connections within the site and to the neighbourhood
- Support servicing needs within and adjacent to the site
- Enhance access by transit while supporting potential for expanded service in the future
- Improve sense of arrival, wayfinding, and legibility for both locals and visitors

### **An interwoven place**

- Design the shoreline as an overlapping, multifunctioning space, rather than an edge or boundary
- Design for connection across generations, cultures, abilities, and identities
- Create conditions that can enable Coast Salish and Indigenous cultural practices and access
- Strengthen reciprocal relationships between people, plant and animal communities, and ensure plant and animal needs are interwoven with the park
- Increase connectivity to and from the water, and express Coast Salish canoe culture

### **A resilient place**

- Emphasize nature-based coastal adaptation strategies for climate change
- Expand and reconnect upland, intertidal, and subtidal habitats, and increase biodiversity
- Plant Coast Salish and Urban Indigenous native and adaptive plant communities
- Express the connection of city to ocean with on-site rainwater management
- Increase food security
- Provide flexible and resilient infrastructure to ensure continued utility and transportation service and access

## 2.0 ISSUES AND OPPORTUNITIES



## 2.1 Site Assessment and Analysis

The local First Nations have had a close relationship with these waters and the local flora and fauna for millennia. Water is an elemental part of Vancouver's identity, intrinsically linked to our everyday experience. Located on the Burrard Peninsula, Vancouver lies between the Burrard Inlet to the north; the Fraser River to the south; and the Strait of Georgia, an arm of the Salish Sea, to the west. The West End waterfront park system fronts onto English Bay and the mouth of False Creek, with a prominent backdrop of the Coast Mountains, Salish Sea, and Vancouver Island beyond.



## 2.1.1 City Context

An extensive assessment and analysis of the site was undertaken at multiple scales in the early stages of the plan process that included a comprehensive analysis of city open data, a review of the relevant reports and policies listed in Section 1.5 Project Process, and a detailed analysis of existing site conditions conducted by a team of consultants with expertise in relevant fields. The following is a list of consultant reports that were developed:

- Stormwater Management Assessment
- Metocean Assessment
- Geomorphological Assessment
- Intertidal Environmental Report
- Upland Environmental Assessment
- Archaeological Overview Assessment
- Site Lighting Analysis
- Public Art and Monuments Inventory
- Transportation Assessment
- Story of Place document (confidential document by Sky Spirit Studio)

The following sections provide a brief summary of key themes and findings from the site assessment and analysis process, with the complete detailed reports available for reference in the Appendix within the Site Assessment and Analysis Report.

Vancouver is located on the traditional and unceded territory of the xʷməθkʷəy̓əm (Musqueam), Sḵwxwú7mesh Úxwumixw (Squamish), and səliłwətaʔ (Tseil-Waututh) Nations who have been here from time out of mind.

### Demographics

- Vancouver is the third largest metropolitan region in Canada, but has the highest population density in the country.
- The city has third largest Indigenous population in Canada.
- More than half of Vancouver’s population belongs to non-Indigenous visible minority groups and are non-native English speakers.

### Ecology and Climate

- Vancouver has a temperate climate, with annual precipitation of 850 mm that falls predominantly as rain.
- Historically, Vancouver was primarily temperate rain forest with scattered wetland zones and multiple streams, though since the mid 1800’s the majority of streams, marshes, and mudflats have been filled and urbanized, and the original native forest that once existed was cleared by logging and development in the early 20th century.

### Parks

- Parks cover 11% of Vancouver and 46% of the City’s shoreline is protected as public land.
- The West End waterfront is a gateway to Stanley Park, Vancouver’s largest (405 ha) and oldest park.

### Transportation Networks

- The City’s transportation planning incorporates a hierarchy of transportation modes in the order of pedestrians, cyclists, transit, taxis and shared vehicles, and then private vehicles.
- The Seaside Greenway is a 28-km long all-ages-and-abilities walking and cycling route that passes through the project site.
- Vancouver’s public transit network is comprised of the West Coast Express train, the SkyTrain system, buses, the SeaBus, and privately-operated ferries including Aquabus and False Creek Ferries.
- Vancouver has no freeways into or through the downtown area.

## 2.1.2 Neighbourhood Context

The West End is a dense, active, and diverse community, with multiple recreational opportunities located within the neighbourhood or nearby.

### Demographics

- Currently, the West End is the fourth most densely populated community in Vancouver with 45,000 residents, 23,000 jobs, and millions of visitors annually.
- 2018 estimates project that the West End will add 18,000 residents by 2041, a 40% increase in population.
- Approximately one third of the visitors to the project site reside within the West End, while a third are from out-of-town and the remaining reside in other parts of Vancouver and Metro Vancouver.
- The West End is home to the largest LGBTQ2S+ community in Western Canada.
- The West End has a large percentage of one person households (59%), and housing stock is over 80% rentals.

### Ecology

- The English Bay-Burrard Inlet is designated as an Important Bird & Biodiversity Area and support large numbers of waterbirds.
- Salt marsh habitat was observed north of English Bay beach and into Stanley Park, and an eelgrass bed is located north of the site boundaries adjacent to Second Beach.

### Community and Recreational Amenities

- The neighbourhood is serviced by both the West End and Coal Harbour Community Centres, Gordon Neighbourhood House, and Barclay Manor (West End Seniors’ Network).

### Transportation Networks

- A new Bute Street Greenway is underway that will connect Sunset Beach to Burrard inlet via Jim Deva Plaza and Nelson Park.
- The closest SkyTrain stations to the area are the Burrard Station and the Yaletown-Roundhouse Station. The #2, #5, #6, and #23 bus routes connect these stations to the project site.
- On Robson, Davie, and Denman Streets, most curbside space is pay parking. On residential streets, parking is mainly reserved for resident permit parking with limited areas of metered or timed parking.
- Surface and covered parking lots are accessed primarily off Davie, Denman, and Robson Streets.

## 2.1.3 Site Context

The West End waterfront site sits to the southwest of the West End neighbourhood; land on which Coast Salish people have lived and cultivated for millennia.

### Site Morphology

- The site was historically a natural and varied shoreline, with a heavily vegetated backshore, bedrock outcrops, and sections of both rocky and sand-dominated shorelines.
- The shoreline is dominated by natural long-shore drift of sand sediments from northwest to southeast, creating the beach at English Bay, and sandy spits on either side of the False Creek entry.
- Between the late 1800s and 1990s, English Bay Beach and Sunset Beach have been expanded seaward through construction of rocky headland structures (rip-rap) and beach nourishment.
- The existing seawall was designed and built between 1917 and 1980, though many sections are reaching the end of their serviceable lives and require repairs and upgrades.
- The only accessible point of entry to the beaches is at English Bay through Morton Park, with steep gradients of 20% and more from Beach Avenue to the lower lawns and hardscapes east of Bidwell Street.

### Ecology

- The waterfront is a highly modified shoreline characterized by a mixture of sand, rip rap, and cobble intertidal habitats.
- The majority of the intertidal zone is unvegetated with some areas of moderate to high cover of rockweed and green algae.
- Backshore vegetation is typified by small patches of native and invasive shoreline species, planted trees, biodiverse lawn, maintained landscape areas, hedges, and community gardens.
- There are over 550 trees located on City-owned lands within the project site.

### Sea Level Rise

- The local relative sea level rise considered for this project is 1.2 m for the year 2100, which includes an allowance of 1.0 m for global sea level rise and 0.2 m for local land subsidence.
- After 1.2 m of SLR, much of the existing beaches and lawns at English Bay and Sunset Beach will be underwater at high tide, and wave run-up will reach the English Bay Bathhouse building.

### Water and Utilities

- There are three localized low points along the stretch of Beach Avenue, at Gilford, Bute, and Burrard Streets, where overland flows pond during major storm events.
- There was previously an unnamed creek that appeared to flow from the intersection of Barclay and Bidwell Streets to an outlet west of the current intersection of Gilford Street and Beach Avenue.
- Much of the underground infrastructure will exceed its serviceable life and have to be replaced and/or upgraded during the plan timeline.
- Key infrastructure within the project site includes the Jervis Pump Station, Metro Vancouver's West End combined sewer outfall, and Metro Vancouver's trunk sanitary sewer.

### Buildings and Facilities

- The bathhouse is a heritage class B structure built in 1931 that holds change rooms, washrooms, a lifeguard station, and watercraft storage.
- Adjacent to the bathhouse is a glass two storey restaurant housing the Cactus Club restaurant and concessions.
- The Haywood Bandstand is a heritage class A structure that is the last remaining of 7 bandstand structures that were built across Vancouver, and has sat in the center of Alexandra Park since 1914.
- The Aquatic Centre, built in 1974, accommodates an Olympic sized pool and diving facility, and will be replaced within the plan timeline.
- The Concession Stand at Sunset Beach accommodates a concession stand, washrooms, a lifeguard station, and an unoccupied residential unit that was previously inhabited by the park caretaker.

### Programming and Site Uses

- The largest sanctioned event is the Celebration of Light, which is a fireworks festival that draws hundreds of thousands of spectators to English Bay and the surrounding areas over three separate days.
- A number of different races and marathons pass through or use parts of the site for staging, including the BMO Vancouver Marathon.
- Events are more frequent during summer months, though there are events that occur throughout the year.
- People inhabit the park on a daily basis and in countless ways that change on a seasonal and temporal basis such as impromptu and informal performances, outdoor fitness classes, and small gatherings for cooking, playing games, or celebrations.

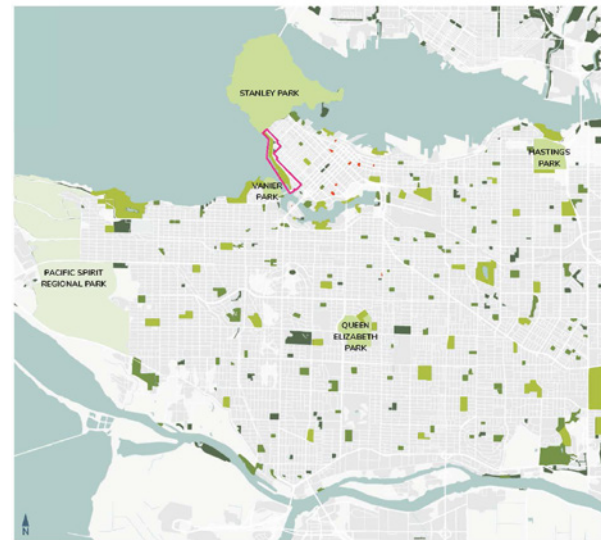
### Transportation Networks

- Pedestrians gravitate toward the seaside, and the seawall paths consistently have the highest flow among all paths within the parks.
- The Denman-Davie intersection has the highest pedestrian crossing volumes, and Denman Street is a major entry point to English Bay.
- During Covid-19, the seawall bike path west of Hornby Street was moved to Beach Avenue to create more room for pedestrians and cyclists.
- Several Mobi docking stations from Vancouver's public bike-share system are located in and close to the project area.
- Three bus routes (#5, #6, and #23) have stops within the study area.
- 50% of the vehicles that use Beach Avenue are not originated from or destined to the West End neighbourhood.
- False Creek Ferries has a stop close to the Aquatic Centre at the foot of Thurlow Street, while Aquabus Ferries has a stop at the foot of Hornby Street close to the Burrard Bridge.
- Unmotorized watercraft can be launched from designated areas along the beaches.
- There are 4 parking lots along the length of the project site, however throughout Covid they have been intermittently closed.
- Accessible parking spots are currently located in the Sunset Beach, Jervis, and Aquatic Centre parking lots.

The images on Page 29 are a sample of the diagrams provided for reference in the Appendix within the Site Assessment and Analysis Report. Note that this report was completed in 2021 and may not reflect changes that have occurred on the site after this time.



### 2.1.2 Parks



The Vancouver Board of Parks and Recreation operates over 230 public parks, ranging from temperate rainforests to urban plazas and a robust network of community centres, swimming pools, skating rinks, fitness centres, golf courses, marinas, playing fields and street trees. Parks cover 13% of Vancouver while 46% of the City's shoreline is protected as parkland (99% is accessible by the public).

VanPlay's 2040 Asset Target for park space is a citywide average of 1.1 ha of neighbourhood parkland per 1,000 people similar to the 1992 asset targets. Current citywide average provision of neighbourhood parkland is 1.09 ha per 1,000 people. VanPlay research suggests that if we don't keep pace with new development and rising population, we will see a decrease of 13% of park space allocated per person in 20 years (VanPlay, Chapter 2 Parks, p. 37).

The park system is made up of a variety of park typologies including:

- Destination Parks:** 20+ ha in size, with a large number of amenities and means that serve local residents, regional visitors and tourists.
- Community Parks:** 10 - 20 ha in size, with 6-15 amenities and are regional attractions.
- Neighbourhood Parks:** 2.5 - 10 ha, in size with 3-7 amenities that serve neighbourhood residents.
- Local Parks:** 0.5 - 2.5 ha, in size with 1-4 amenities that are primarily local.
- Urban Plaza:** Less than 0.4 ha in size, with primarily hard-use areas and 1-3 amenities, usually located in dense urban areas.

Stanley Park is a Destination Park, while English Bay Beach Park and Sunset Beach Park are Neighbourhood Parks, and Alexandra Park and Morton Park are Local Parks.

### 2.2.5 Parks and Open Space



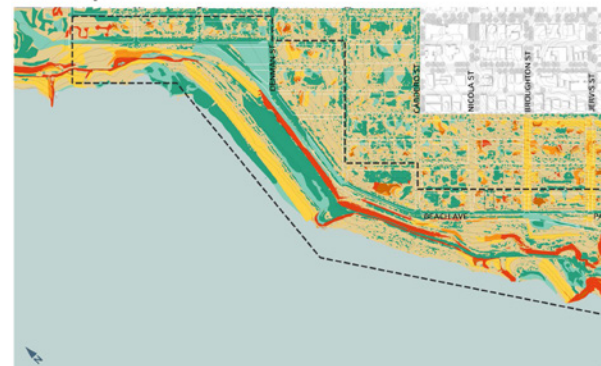
The West End is defined by its walkable, tree-lined street network that links a hierarchy of parks, marinas and plazas. The concentration of smaller rental units, and a high percentage of single occupancy residences means that the West End's parks and open spaces form a vital social network throughout the neighbourhood, where neighbours can meet and connect. These lush green spaces are highly valued by residents, and have contributed to the West End's distinct character. During Covid-19, public usage of these open spaces has grown and diversified exponentially, with many more informal events occurring in public spaces such as exercising, dinner parties and even business meetings. Previous boundaries between public and private dissolved, increasing the casual vibrancy of the neighbourhood.

At 1001 acres, Stanley Park is the largest Destination Park in Vancouver, taking up half of the downtown peninsula and forming the western edge of the West End. This area is known to have been one of the most important and largest village sites of the Musquam, Squamish and Tsel-Watuth Nations (believed to be Squilwax (Squw) in Squamish language and in Twana/Tahltan language as Tsap'wax (Whawax)), and is today densely treed with over half a million trees, some several hundred years old.

Community Parks in the area include Nelson Park, English Bay Park and Sunset Beach Park. Barclay Heritage Square Park is a Neighbourhood Park, while Morton Park and Alexandra Park are Local Parks. Several Mini Parks, placed to block traffic throughout the West End, provide 'outdoor living rooms' while maintaining through traffic. Lord Roberts Elementary School and Annex, and King George High School also provide significant open space for recreational fields and playgrounds.

While there are some urban plazas within the West End including Jim Deas Plaza, the majority of urban plazas within the area are located north of Georgia Street, part of the privately owned public space network created through Community Amenity Contributions in the creation of Coal Harbour.

### 2.3.2 Slopes



The relationship of the parks and beaches to Beach Avenue and the neighbourhood fabric beyond varies substantially with the flattest and most direct relationship being at English Bay Beach, Morton Park and the Sylvia Hotel. From Bidwell to Jarvis Street, park space slopes gently from Beach Avenue to lower slopes below that intersect with the sea wall, and rocky beaches below. From Jarvis St. to Burrard Bridge, steeper gradients of 20% and more terrace immediately from Beach Avenue to lower levels and hardspaces at grade with beach access. Groyne along this zone have retained sand at varying slopes.

Broughton, Jarvis, Bute and Throlo Streets have slopes of 10-15%, making it challenging for pedestrians and cyclists to reach the parks, transit and the aquatic centre (particularly for seniors).



### 2.1.6 Buried Streams

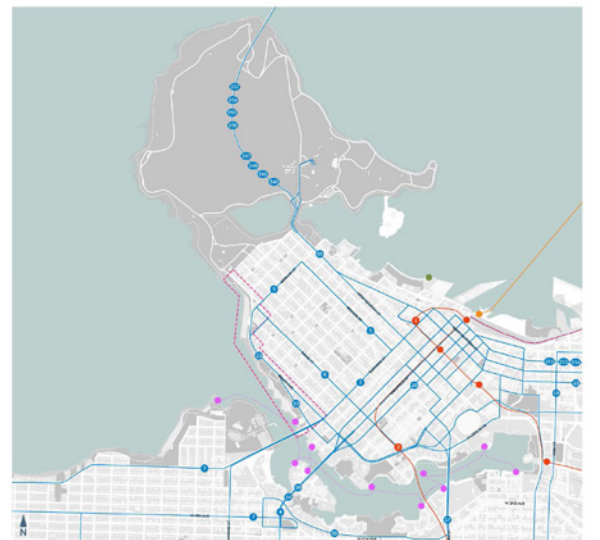


From the early 1800s on, many of Vancouver's streams have been piped and buried from sight. These streams once created ecological corridors and salmon habitat, and cleared and buried water bodies entered the Burrard Inlet, English Bay, False Creek or the Fraser River.

Based on aerial maps and images of the City of Vancouver, it is apparent that there was previously an unnamed creek in the West End waterfront site that appeared to flow from the approximate location of Barclay St and Bidwell Street, approximately 400m, where it would cut west of the current intersection of Gilford Street and Beach Ave. Based on the length, location, and likely catchment area, it would suggest that this was an unnamed creek, receiving flows only during the wettest seasons and discharging into English Bay.

The City is exploring the concept of creating a regional network of blueways, or connected stretches of rivers, lakes, canals, and coastline, through which present day waterways can be managed from the perspective of ecological preservation and stormwater management while former waterways are treated by restoring or dignifying them. Blueways improve water quality, absorb carbon and heavy metals, buffer floods, protect and expand urban forests, and increase biodiversity and wildlife habitats.

### 2.2.9 Public Transit



24% of West End residents take transit to work compared to 25% citywide. The discrepancy is partly because it is so easy to walk to work. Three bus routes have stops within the study area: the #6, #6L, and #23. The #6 and #6L run in an interconnected loop on Robson, Denman, and Davie Streets, meaning that passengers can remain onboard while the route number changes. Stops are generally spaced every 120 to 250 metres, which maintains walking distances to destinations on the street but increases travel times for people travelling through the area. This is closer together than TransLink Transit Service guidelines, which recommends spacing of 300 to 600 metres for all-day frequent routes.

The #23 travels between Davie & Bloor. Prior to the closure of Beach Avenue between Denman Street & Morton Avenue, the #23 on Morton Avenue completed its route on Morton Avenue at Denman Street. The bus route is served by small community shuttle vehicles and operates from 6 am to 12 am at a frequency of 12 to 15 minutes on all days. It has a total capacity of 24 passengers (including seating and standing) and is rarely crowded except during the time of Sunday holidays in the summer. #23 bus stops are within 7 minute walk for under 200m from Main Street - Science World Station, Stadium - Chastanout Station, and Yellow-Redhouse Station, providing convenient transit from English Bay to both Expo Line and Canada Line.

#596 operates from 5:30 am to 12 am at a frequency of 5 to 7 minutes during peak hours on weekdays and 15+ minutes on weekends. #596 has a total capacity of 44 passengers per bus and generally serves the busiest bus routes in the 14th most crowded bus route with the slowest average speed among 216 TransLink bus routes.

Other transit routes nearby include the #2 bus route on Burrard Street, as well as the #19 to Stanley Park and the #200-numbered routes turning on Georgia Street to North Vancouver and West Vancouver. The closest SkyTrain stations to the area are Sunset Station on the Expo Line, from which passengers can connect to the #2 bus route to reach Burrard Street & Pacific Street, or the #6 bus route to Davie Street & Denman Street. On the Canada Line, the closest station is Yellow-Redhouse, where passengers can connect to the #6 or #23 bus routes. These bus stops are within a 5-minute walk or under 600m from the stations.

### 2.3.15 Stormwater and Sea Level Rise



Climate change is anticipated to cause an increase in precipitation intensity and volume. In addition, climate change will also cause sea level rise and coastal flooding impacts. The primary assessment documents consider a sea level rise of 1.2 m by year 2100. For all critical infrastructure (i.e. hospitals, evacuation routes) this value is to increase to 2.0m.

The West End Waterfront site incorporates approximately 1800 m of waterfront beach area with multiple storm and combined sewers within the project area. On top of rainfall generated within the project site, the site also accommodates flow through from the contributing catchment via overland flow pathways and stormwater outlets. Of the 1.8 km of beach area, 10% is impervious.

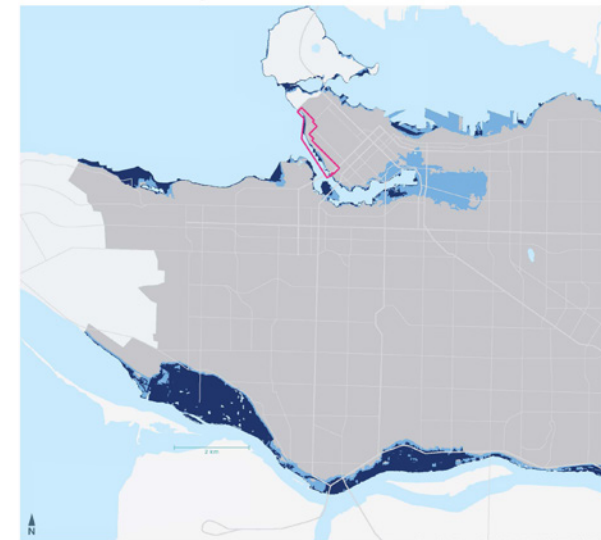
Overland flows generally occur in storm events exceeding the 10-year return period and follow the general area topography, running along the road pattern. Overflows along Beach Avenue range from 5.7 m (at Gilford Street to 10.5 m (at Braggton Street). There are three potential low points along the stretch of Beach Avenue, at Gilford Street, Bute Street, and Burrard Street. During a major storm event, when the underground system is surcharged, any flows that surcharge to surface end up on Beach Avenue via overland flow or flooding catchments. Overland flows either percolate into the roadway or if the underground system has capacity, or discharge toward English Bay via low points along the curb cut at Beach Avenue at low points at Gilford Street, Bute Street, and Burrard Street respectively.

This diagram shows SLR of 1.2 m, with overland flow and a 100 year storm event. The 100-year future scenario shows the most significant flooding and overland flow pathways within the project site. Significant overland flooding occurs at Beach Avenue flowing to the ocean near Gilford Street, Morton Avenue, and Bute Street. Even with the curb along Beach Avenue, there are still locations where overland flow onto the beach occurs at low points. The total boundary significantly impacts the future conveyance capacity in the pipe storm outlets. At both the dedicated storm outlets (at Jarvis Street) and the Metro Vancouver outfall (north of Chris Street), sea level rise causes significant backflow in the pipe and causes surcharge within the system. The surcharged system discharges via the low points along the Beach Avenue right way more efficiently than through the piped storm outlets.

\*For further information refer to Appendix 3.2.



### 2.1.7 Coastal Floodplain



As a coastal city, Vancouver is vulnerable to sea level rise and flooding due to climate change. Vancouver's floodplain was modeled in 2013, and flood hazards and coastal flood risk were calculated for the year 2100. Without flood management, areas in dark blue are vulnerable to flooding due to a major storm (1:500 storm event), and areas in light blue are vulnerable to flooding due to a major storm event at high tide combined with a projected 1 metre of sea level rise by 2100. The Annual Exceedance Probability (AEP) of a 1:500 storm event occurring in any year is 0.2%. The combination of these two areas represent the City's current flood plain. In this scenario, Stanley Park would become an island and significant areas of the City's low lying areas would flood.

Local relative sea level rise is the combined effect of global sea level rise and local land subsidence or uplift at any given location. Global sea level rise is the product of a changing climate, associated with increased global sea melt and ocean volumes (due to thermal expansion). Local changes in the land elevation are the result of isostatic rebound due to the historical retreat of glaciers, tectonic uplift, and sediment consolidation. The local relative sea level rise considered for this project is 1.2 m for year 2100. This includes an allowance of 1.0 m for global sea level rise and an allowance of 0.2 m for local subsidence by year 2100. The City of Vancouver's recently released Sea-City Challenge will investigate impacts on False Creek with 1 m, 1.4 m, and 2 m of sea level rise.

NOTE: This diagram was generated previously as part of the City of Vancouver's 2018 Climate Change Adaptation Strategy and is included as a reference only. This site analysis study intends to build upon and update this prior work based on new LIDAR, science on sea level rise, and updated modeling/analysis published following 2018.

### 2.2.15 Edge Conditions



For millennia, Coast Salish Nations lived on and cultivated the land and resources in the region. Canyons, gardens and fishing weirs were used in areas to extend the shoreline habitat to grow more crops and other foods, and to more efficiently gather fish. The West End Waterfront was historically a largely natural and varied shoreline, with a heavily vegetated backshore, beech outcrops, and sections of both rocky and sand-dominated shorelines. The shoreline was dominated by natural long shore drift of sediment from northward to southward, driven by the dominant incident wave climate in the area. Longshore transport drove sand and sediments along the shoreline, depositing a wide beach at what is now known as English Bay Beach, and sandy spots on either side the entrance to False Creek.

Between the late 1600s and 1990s, the West End waterfront was heavily modified and manipulated with extensive shore line armoring and beach nourishment. Although English Bay Beach appears relatively stable, Sunset Beach appears to be slowly eroding. The stability of these beaches and nearby sections of shoreline is dependent on numerous geomorphic processes, including waves, run-off, foot traffic, and sea levels. As sea levels rise, the waterfront will be exposed to increased wave energy, which may alter geomorphic processes, potentially changing the fragile equilibrium that currently exists.

The existing seawall running through the project site was designed and built between 1917 and 1986, likely without consideration of sea level rise and future climate change impacts such as sea level rise. Many of the sections require extensive annual maintenance to keep the structure in a serviceable condition, with the section of hard edge wall between English Bay Beach and Sunset Beach being in the worst condition in 2011. Based on a 2013 report by the city of Vancouver, the existing seawall sections are expected to reach the end of their serviceable lives within the next seven to twelve years. It was recommended that the seawall undergo a phased rehabilitation/reconstruction program prior to the end of its serviceable life.

### 2.3.35 Shoreline Evolution



Following glacial retreat, the shoreline area has continued to change in response to numerous factors, including tides, waves, currents, winds, sediment dynamics, run-off from glacial areas, and anthropogenic activities. This diagram shows the corresponding changes to the approximate location of the shoreline between 1939 and 2015.

It is clear that the shoreline has been highly modified by anthropogenic influences. In particular, English Bay Beach and Sunset Beach have been expanded seaward through construction of rocky headland structures (rip-rap) and beach nourishment.

\*For further information refer to Appendix 3.4.





# 2.2 Site Opportunities

Based on the site assessment and reports, public engagement, and discussions with the consultant team, several preliminary 'blue sky thinking' site opportunities were put forward for consideration and discussion in an Innovation Workshop. The opportunities were suggested in plan, section, and through on-site discussions. Through interdisciplinary discussions, design synergies were established between land-based approaches to sea level rise, program, ecology, movement networks, interpretation, and facilities. Through further analysis, some of these ideas are incorporated into the final Vision Plan, while others were set aside.

### LEGEND

-  Remove or terrace the seawall and design for occasional flooding.
-  Expand headland and raise and nourish the beaches.
-  Expand the beaches and shoreline outward.
-  Add eelgrass, salt marsh, and mariculture to improve intertidal habitats.
-  Create habitat islands that are inaccessible to people.
-  Add constructed wetlands and rain gardens, and daylight stream / storm outfalls.
-  Increase / improve food options and washroom facilities on site.
-  Express prior, removed facilities like the pier, Englesea Lodge, and Joe Fortes' house.
-  Replace or upgrade the bathhouse, Aquatic Centre, and Sunset Beach Concession.
-  Convert street and parking areas to park space.
-  Add weather-protected and flexible event / gathering spaces.
-  Enhance connection to water with a shoreline walkway / pier.
-  Accommodate canoe landings.
-  Increase pedestrian accessibility and connect to Burrard Bridge.
-  Improve site gateways, street crossings, and wayfinding.
-  Expand the AAA cycle network and enhance cycle wayfinding.
-  Add a recreational cycle route near the water and increase bike parking.
-  Improve transit access to site and connect to Stanley Park.









English Bay Beach on a sunny, spring day.



## 3.0 DESIGN SUMMARY

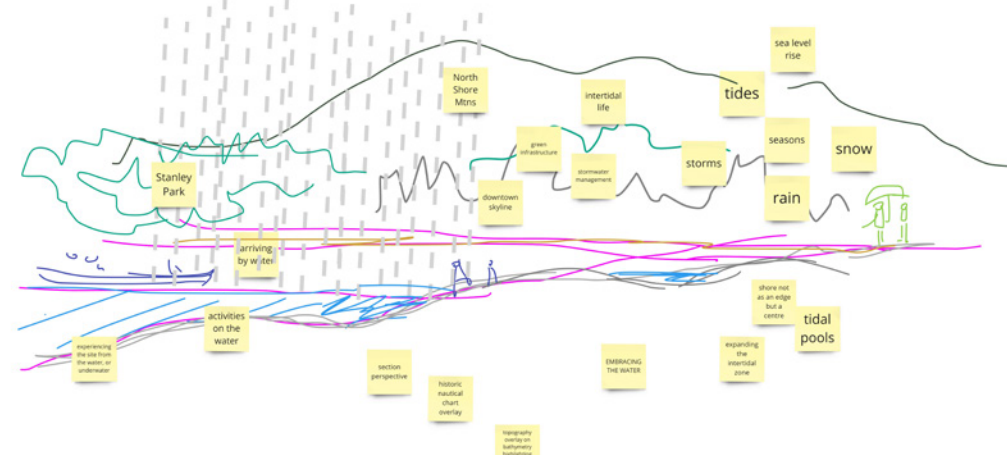


# 3.1 The Design Process

## 3.1.1 Early Explorations

Information was gathered from existing Park Board and City of Vancouver reports, the project site assessment and technical reports, the Story of Place document, the engagement process, as well as through direct experiential engagement with the site throughout the seasons. To develop designs as rich and evocative as the site and its history, a wide range of design media were used, from material models, collage and hand drawing to digital diagramming and 3-D modelling.

Working sessions were used to build questions, brainstorm ideas, share precedents, and to draw together. From the early days of the pandemic, which restricted collaborative drawing to online Miro boards and Zoom, to later in-person design charettes, the iterative process generated the final agreed-upon illustrative vision plan.



PFS Studio, Snøhetta, and Sky Spirit Studio co-design session.

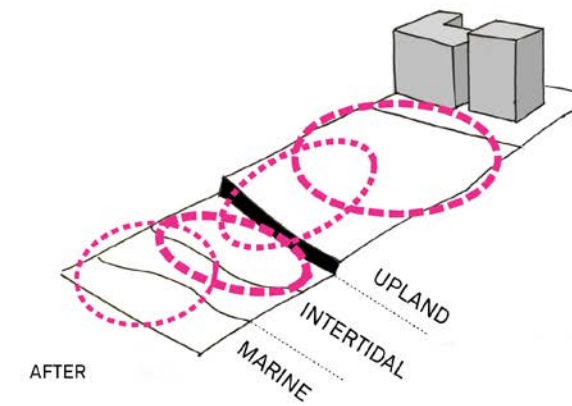
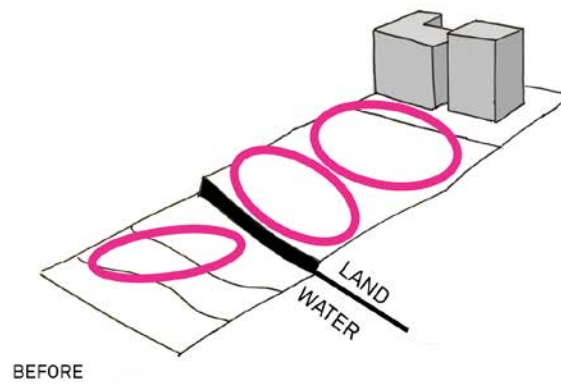




## 3.1.2 Design Strategies

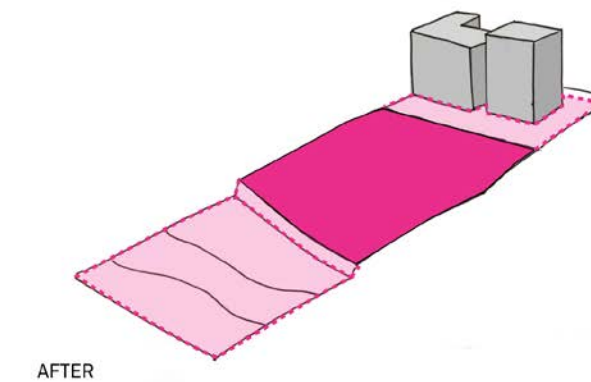
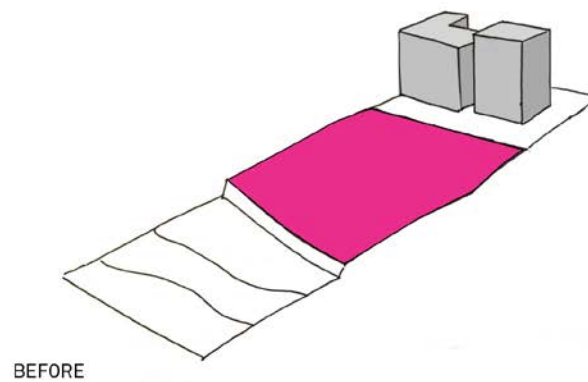
From sketching and modelling, a variety of site strategies were developed in response to project challenges.

### Increasing Population and Coastal Squeeze



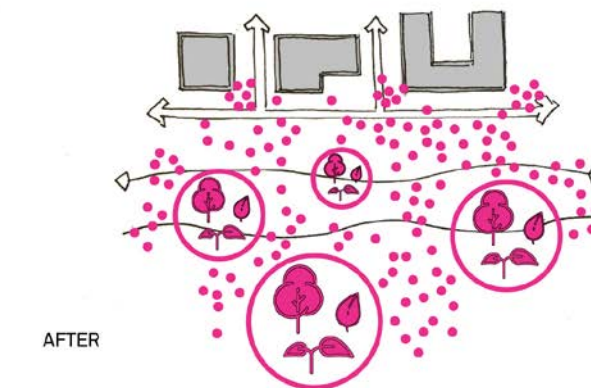
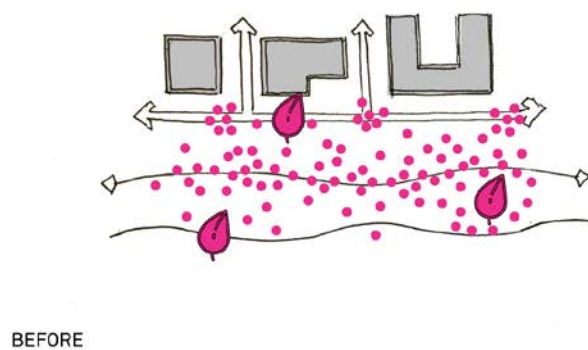
#### MAKE MORE WITH WHAT YOU HAVE

Consider spaces that are adaptable and multifunctional, rather than separate and single-use.



#### CREATE MORE SPACE

Look for opportunities to blur and / or extend boundaries between water, intertidal and upland zones, creating more park space.

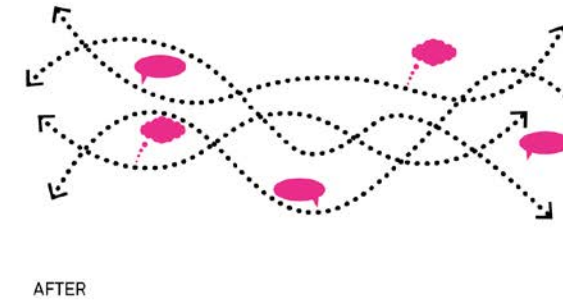


#### SUPPORT DEDICATED HABITATS

Remember that the park is a place for people, animals, and vegetation. Support dedicated and protected habitats for plants and animals in order to allow them to flourish. Allow for both intensively used spaces and quieter reflective spaces for humans.

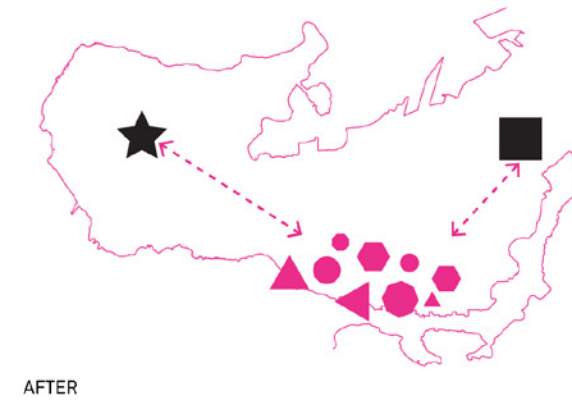
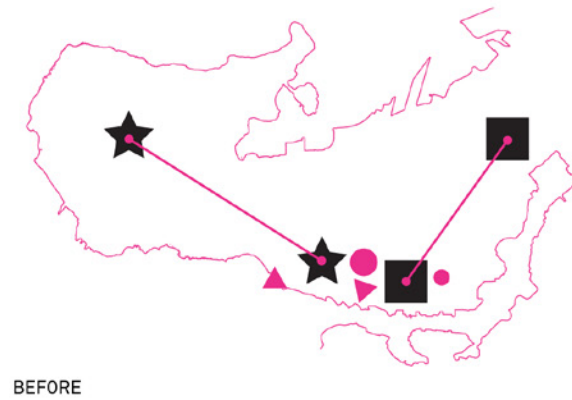


## Park Identity and Functionality



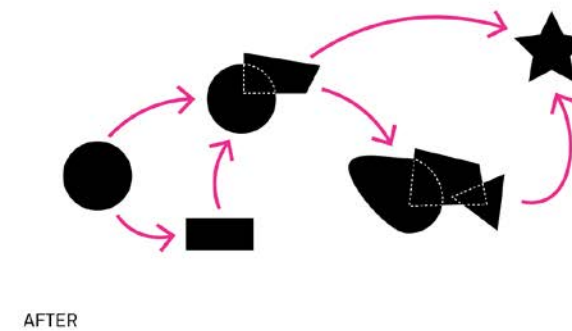
### EXPRESS ERASED HISTORIES AND REVEAL MULTIPLE NARRATIVES

Break with linear, mainstream, and traditionally dominant thinking by highlighting erased and marginalized perspectives, voices, and histories. Create conversations, rather than accepting a singular story.



### COMPLEMENT OTHER PARKS AND OPEN SPACES

Don't recreate what already exists. Rather, complement the larger network of Regional, Neighbourhood, Community, and Local Parks and Urban Plazas.

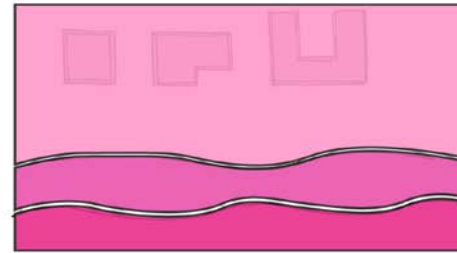


### ALLOW THE SITE TO ADAPT AND CHANGE

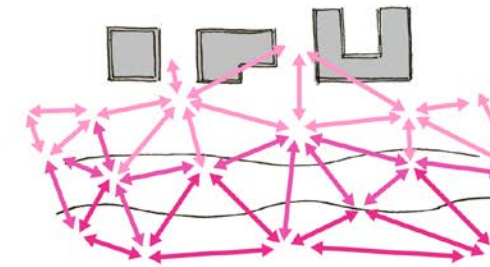
Create infrastructures that are able to respond adaptively and in multiple ways — for different communities, a changing environment, and across time.



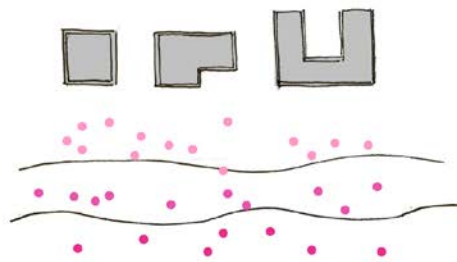
## Declining Ecological Integrity



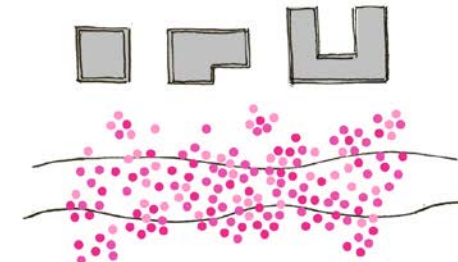
BEFORE



AFTER



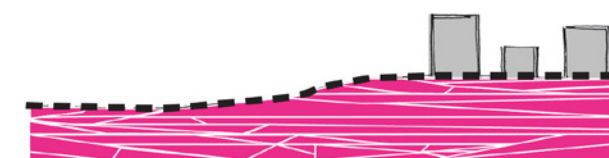
BEFORE



AFTER



BEFORE



AFTER

### RESTORE ECOLOGICAL PERFORMANCE

Create interwoven and holistic ecological systems, breaking down the striation of spaces that is there today. This allows for natural systems to function more healthily.

### PROTECT AND STEWARD HABITAT AND BIODIVERSITY

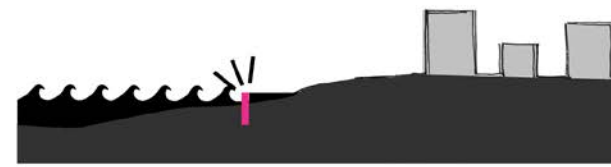
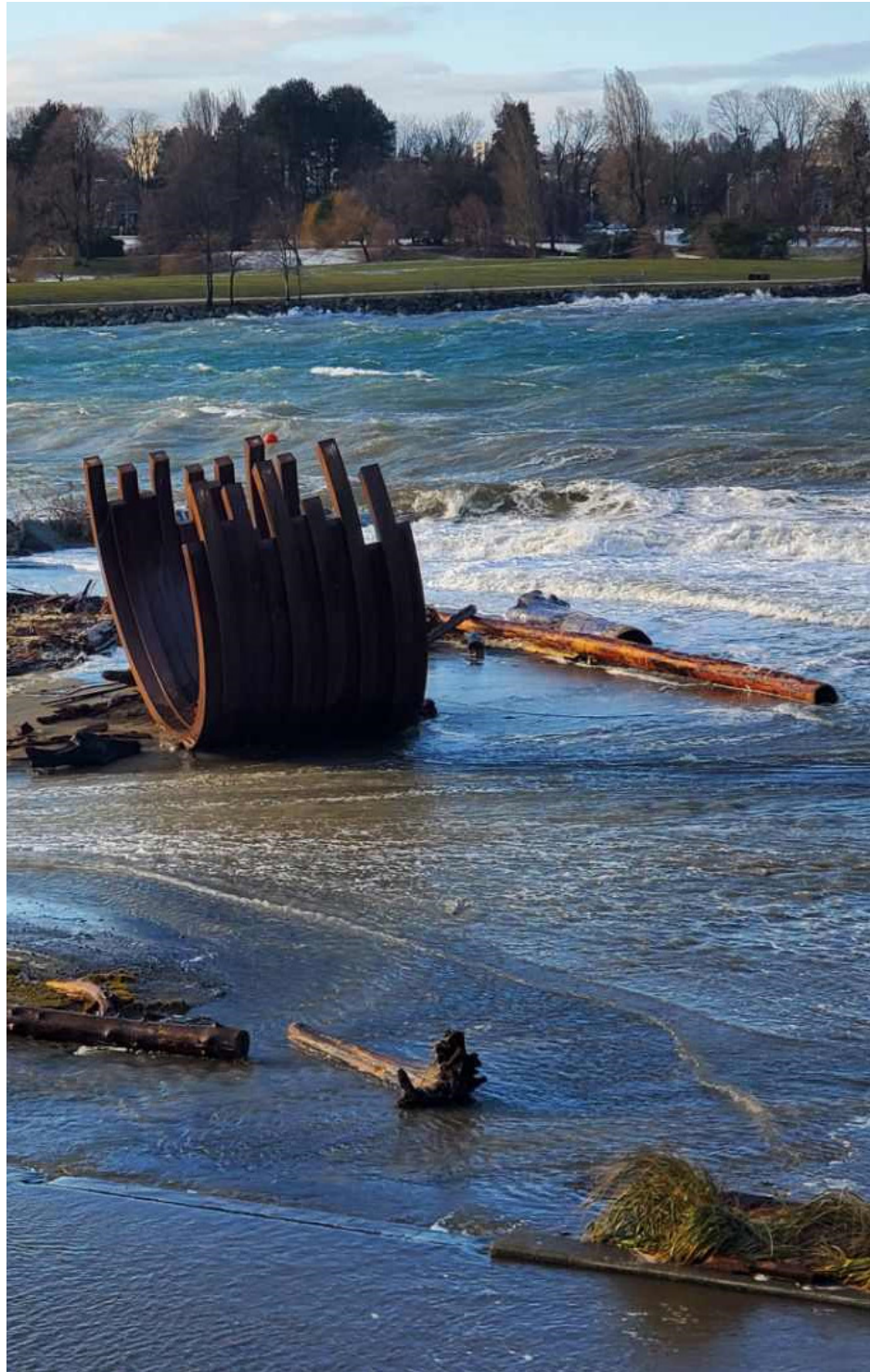
Create optimal conditions for a rich array of plants and animals to flourish. Establish stewardship practices that support and promote this growth.

### RESTORE SYSTEMS AND RELATIONSHIPS

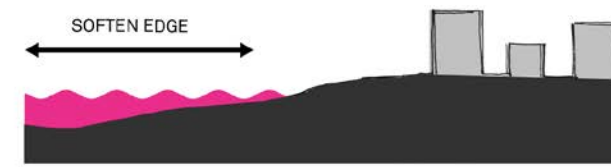
Support local First Nations truth telling and the restoration of healthy lands and waters.



## Climate Change and Sea Level Rise



BEFORE



AFTER

### PRIORITIZE INTERTIDAL RESILIENCY

Mitigate wave forces, promote connectivity between the subtidal and upland zones, and support robust intertidal ecosystems that can survive and thrive in flood conditions.



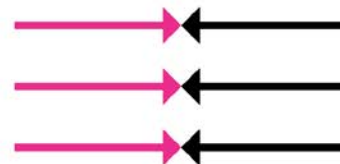
BEFORE



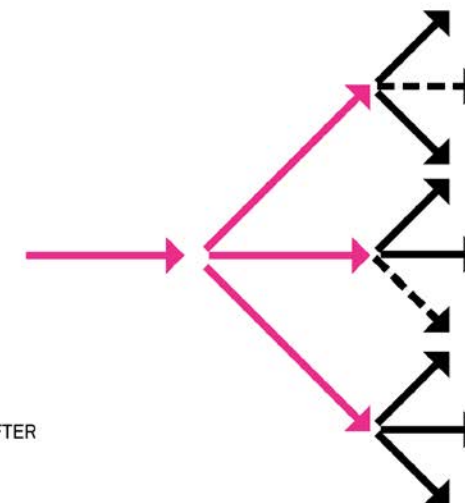
AFTER

### BUILD IN FAIL SAFES / REDUNDANCIES

Protect our systems against increased intensity and frequency of storm and weather events, by creating overlaps, redundancies, and mutually supporting systems. No critical system should stand on its own.



BEFORE



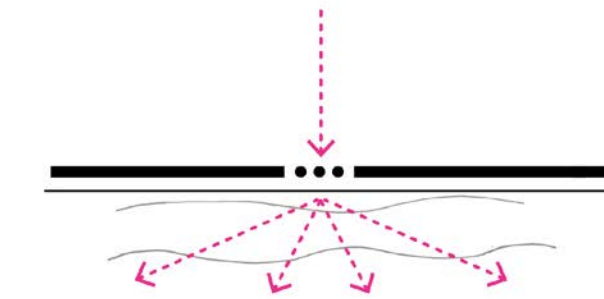
AFTER

### CREATE ADAPTABILITY AT VARIOUS SCALES THEN MONITOR AND ADJUST

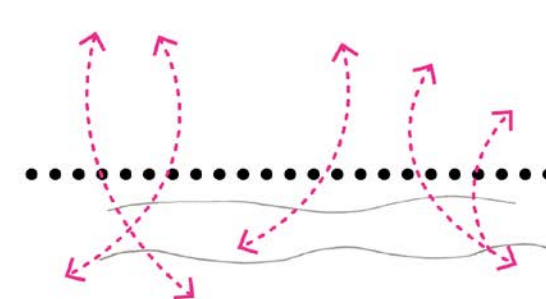
Create flexible systems that can respond and adapt over time. Allow for learning and growth which can yield a myriad of options, rather than a singular set response or reaction.



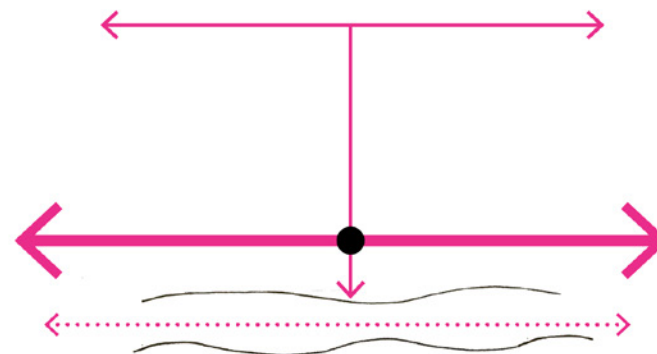
## Access and Connectivity



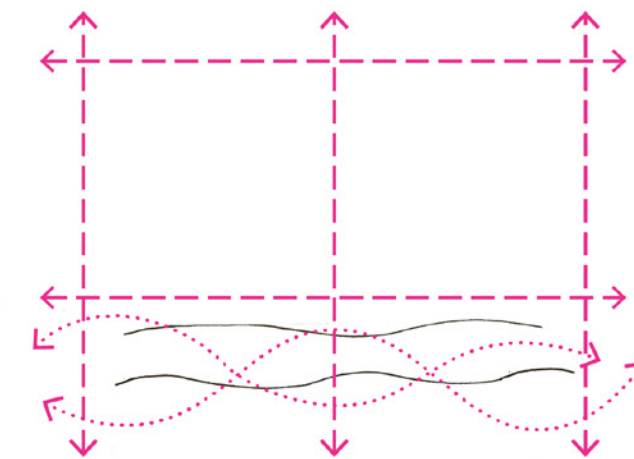
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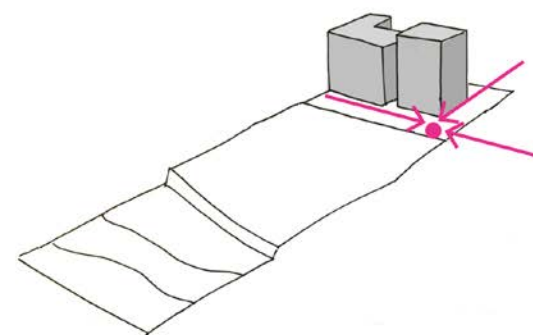
AFTER



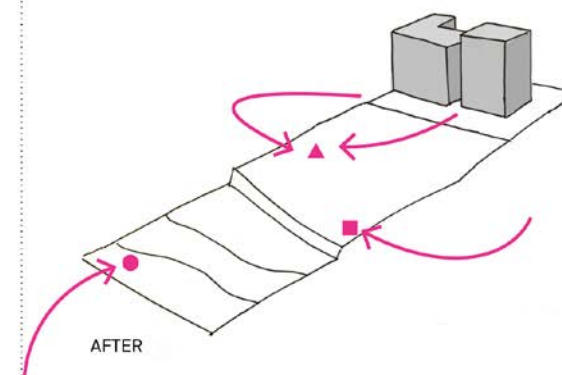
BEFORE



AFTER



BEFORE



AFTER

### REMOVE BARRIERS

Increase porosity throughout the site. This includes interventions to create universal accessibility, strategic thinking about traffic and event access, physical and visual connections, and thoughtful reduction of other psychological barriers to entry.

### STRENGTHEN MULTIPLICITIES IN ACCESS

Decrease pressure on a today's thoroughfares by creating and connecting multiple paths and roadways that can accommodate various modes and speeds of transportation. This will reduce conflicts and congestion.

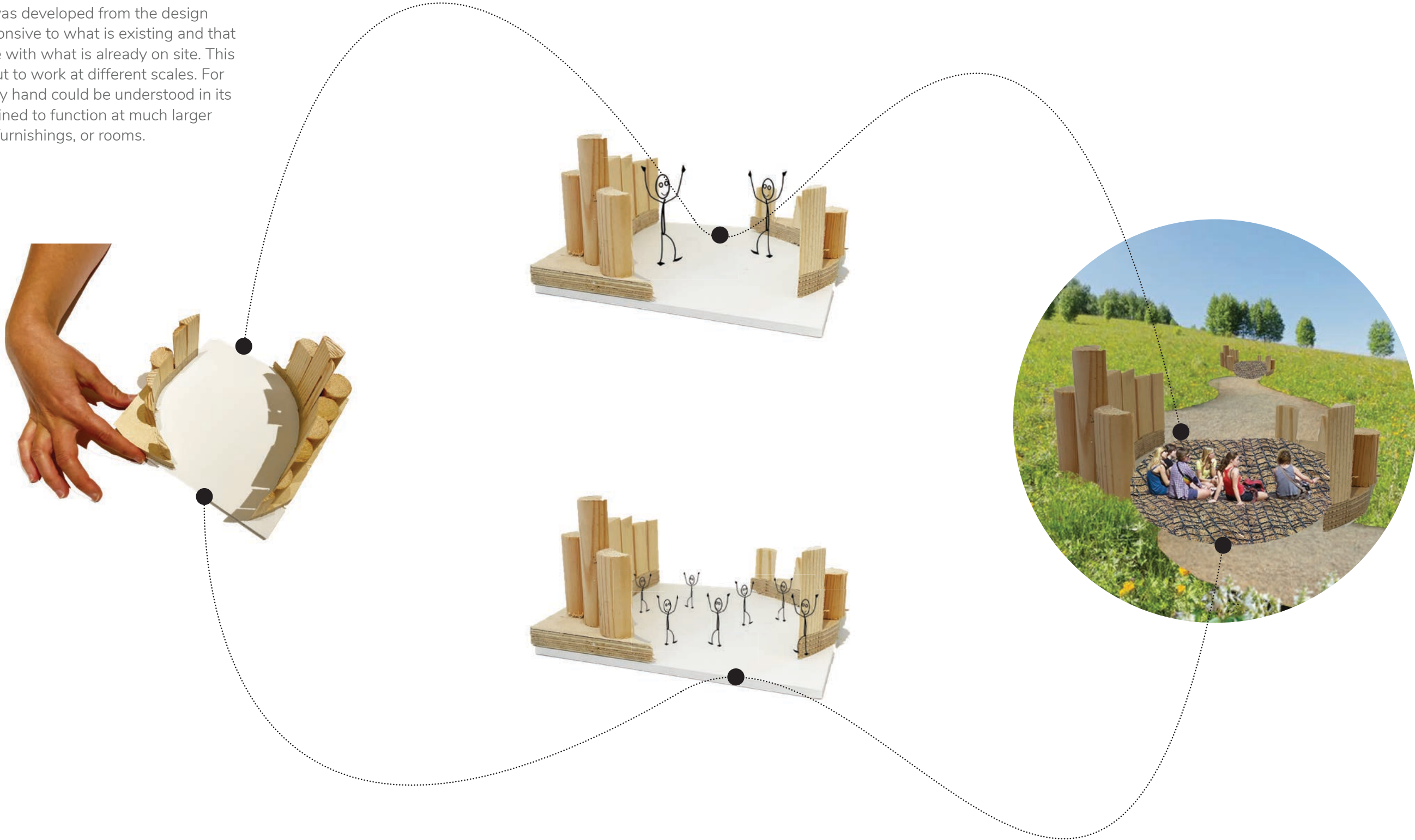
### CREATE CLEAR PHYSICAL, VISUAL, AND EXPERIENTIAL THRESHOLDS

Increase and vary access points across the site. These may be physically or visually demarcated, or may be more experiential in nature. Incorporate other important thresholds into the site, including arrival and access from the water.



### 3.1.3 Soft Frameworks

A framework of softness was developed from the design process that could be responsive to what is existing and that could find ways to do more with what is already on site. This involved zooming in and out to work at different scales. For example, an object made by hand could be understood in its 1:1 scale, or could be imagined to function at much larger scales - as play elements, furnishings, or rooms.





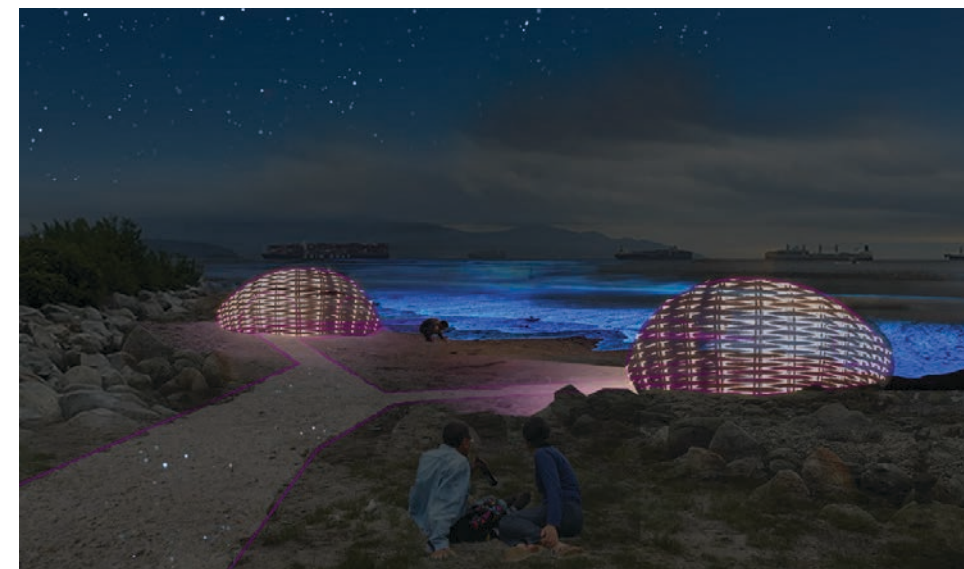
Softness in spatial relationships and form: spaces and thresholds are bounded, but not closed.



Softness in temporality: elements that appear/disappear over time.

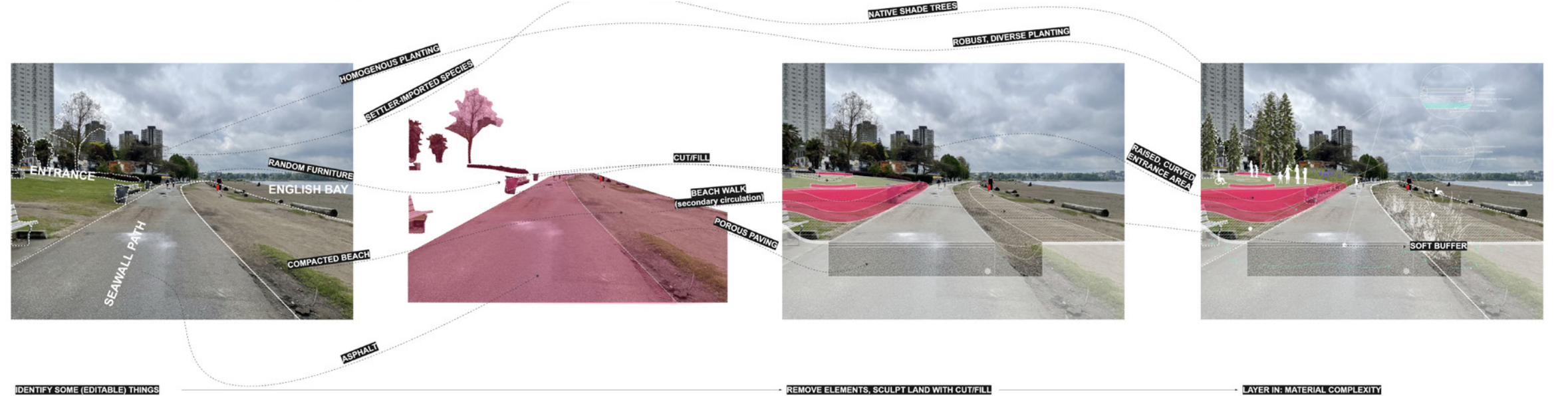
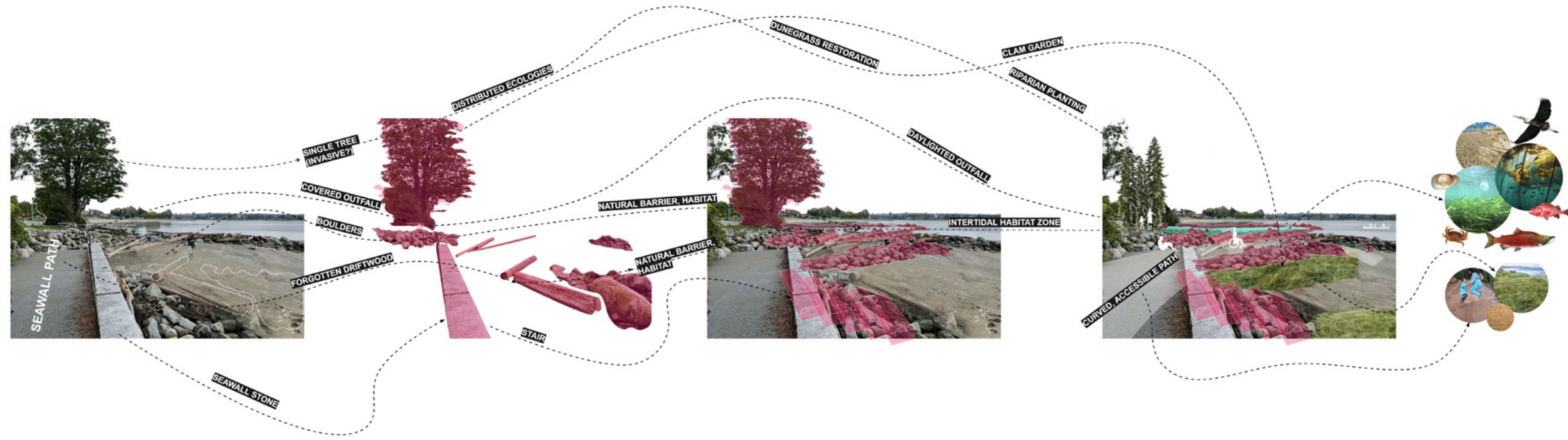
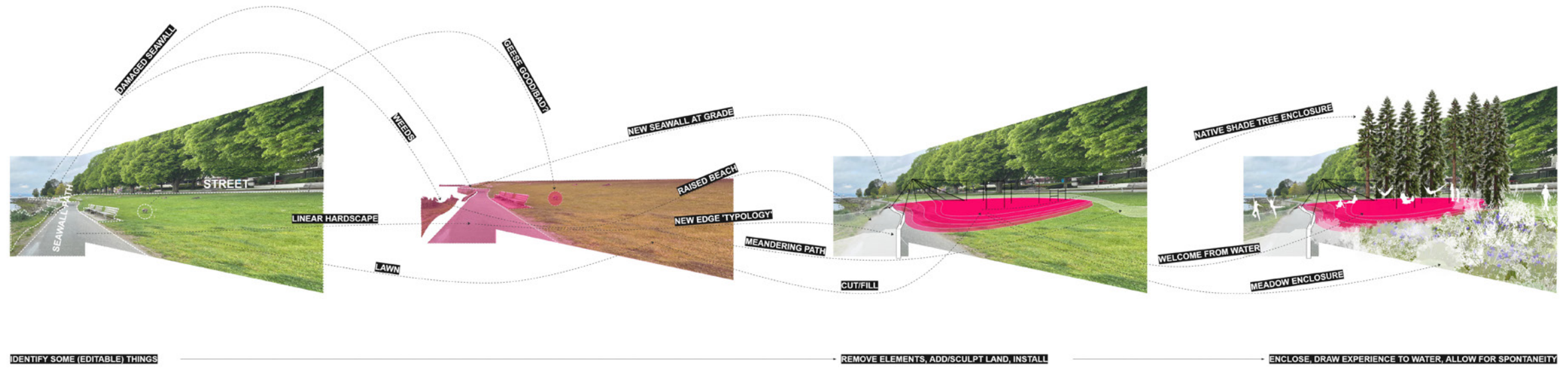


Softness in materiality: soft to touch, flexible materials.





Considering the site through the framework of softness also involved looking at repurposing elements that would no longer serve the same purpose; for example, studying opportunities for alternative uses of the granite coping on the seawall.





### 3.1.4 Three Conceptual Approaches

Three distinct but overlapping themes emerged from the exploratory work and the waterfront's site specific adjacencies: ecology, people, and water. The ecological approach is influenced by the rich ecologies to the east and west: the Coastal Pacific forest and rich intertidal zone of Stanley Park; and the bygone salt marsh of False Creek. The people approach is influenced by the dense, active neighbourhood fabric of the West End neighbourhood. The water approach is influenced by the ocean and the way freshwater moves across land to reconnect to the sea.

At the same time, there has been, and continues to be, an intrinsic interrelationship between natural ecological process and people, throughout history to the present day. This is an active relationship, and the conceptual approaches are also influenced by traditional site-based activities and elements - active and relational verbs rooted to place. All three approaches explore different ways to achieve the same goals, and elements from each design can be combined. For example, all approaches include elements to make the area resilient to future sea level rise.

**Weave** emphasizes and celebrates park activation, public life, and multi-modal movement of people by weaving diverse activities throughout the length of the park. The design is influenced by Coast Salish weaving of soft materials (such as mountain goat or Salish woolly dog wool), as well as longhouses as sites of gathering and community.

**Carve** focuses on the dynamic qualities of water, from daily tidal rhythms to sea level rise and storm events by integrating ways for people to experience fresh and salt water throughout the site. The design is influenced by Coast Salish canoe carving, the carving of coastlines by the ocean, and mariculture such as clam gardens.

**Seed** prioritizes ecology and biodiversity and is influenced by the forests of Stanley Park and the bygone salt marsh of False Creek. The design is influenced by Coast Salish cedar weaving and ethnobotany.

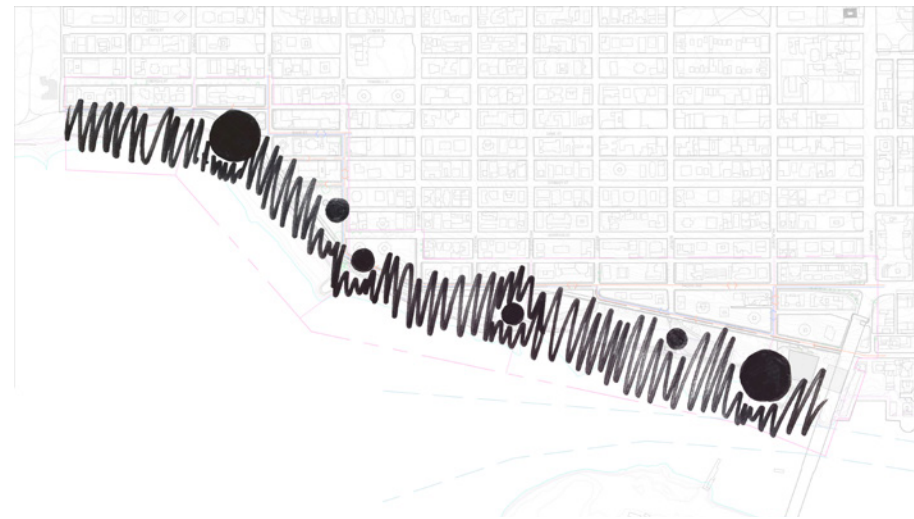
Some common elements are integrated into all three approaches:

- An All Ages and Abilities (AAA) protected bike lane on Beach Avenue and Pacific Street.
- Changing the street configuration at Morton Park to create more park space.
- Changing aspects of Beach Avenue east of Jervis Street with local access maintained.
- Transit route 23 would continue to use Bidwell Street with the route ending on Davie Street.
- Providing opportunities for transit to be extended into Stanley Park.
- Raising and extending English Bay and Sunset Beaches.
- Specific locations for parking (both on- and off-street, including accessible parking stalls and current parking at the Vancouver Aquatic Centre) will be determined in the next phases of planning.





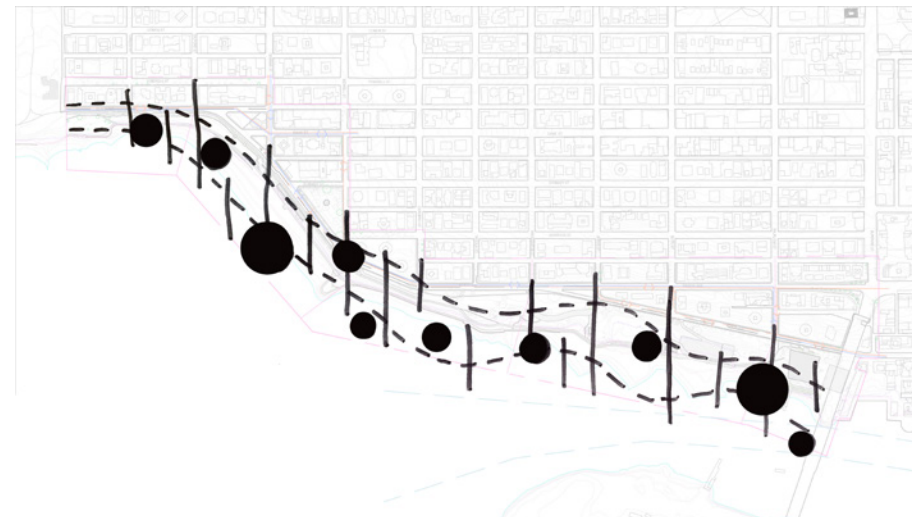
PFS Studio, Snøhetta, and Sky Spirit Studio co-design session.



**CEDAR WEAVING + ETHNOBOTANY | SEED**



Coast Salish basket weaving from Surrey Museum's 'Baskets for Barter' exhibit.



**WOOL WEAVING + LONGHOUSES | WEAVE**



Musqueam weaver Selisya spinning wool using a traditional spindle whorl.  
Photograph by Charles F. Newcombe and Mary Lois Kissell.  
Source: Royal BC Museum/BC Archives; PN 83, Dec. 5, 1915.



**CANOE CARVING + MARICULTURE | CARVE**



Honouring Canoe Teachings: Making a canoe from a cedar log at Eslha7an, (Slhá7an), 1893, COV Archives: AM54-S4-: SGN 437



Gulf Islands WSÁNEĆ Clam Garden Restoration Project, 2020.





**WEAVE** emphasizes and celebrates park activation, public life, and the movement of people by weaving diverse activities throughout the length of the park.

- Design allows for diverse activities that are distributed throughout the park.
- Natural, green areas with diverse native plants are combined with treed lawns and paved areas.
- A new lawn replaces part of the beach at Sunset Beach meant for events and festivals.
- The seawall is raised, with steps or terraces for seating, beaches, and water access; new gathering spaces are added.
- A new Welcome Pavilion (a multi-purpose building with community spaces) and concession / café building are added, along with more space for food carts and trucks.
- A designated bike path runs through part of the park between Burrard and Cardero Streets (half the length of the park).
- Transit route 23 stays on Pacific Street east of Jervis Street.
- Beach Avenue at Morton Park will connect with the intersection of Davie Street and Denman Street; it will be a two-way street west of Denman Street, and one-way east of Jervis Street.



**CARVE** emphasizes and celebrates the dynamic qualities of water, driven by the impacts of sea level rise and climate change, by integrating a variety of ways to experience fresh and salt water throughout the site.

- Opportunities to experience water are offered, including rainwater, freshwater, and the ocean.
- Different levels of land onshore and larger intertidal areas manage changing tides and sea level rise, with dedicated spaces to monitor sea level rise.
- Rainwater gardens collect rain and stormwater and replenish the soil.
- A new bathhouse is built on the western side of English Bay Beach; the walls of the existing bathhouse are maintained to create different zones for outdoor programming and gardens.
- A new concession building is added, along with more space for food carts and trucks.
- The seawall is not raised; elevated paths are added over the ocean for pedestrians and cyclists.
- A designated bike path runs through part of the park between Burrard and Bute Streets (a third of the length of the park).
- Transit route 23 will be split between Beach Avenue and Pacific Street running one direction on each street.
- Beach Avenue at Morton Park will connect with the intersection of Davie Street and Denman Street; it will be two-way west of Denman Street, and one-way between Jervis Street and Thurlow Street.



**SEED** emphasizes and celebrates ecology and biodiversity and is influenced by the forests of Stanley Park and the bygone salt marsh of False Creek. Before colonization, False Creek was an ecologically rich area, with wildlife and vibrant aquatic life, and connection to Burrard Inlet.

- Ecological restoration and biodiversity are highlighted, with more space for certain ecologies, including forest, riparian, salt marsh, and camas meadow.
- Gathering spaces are concentrated at English Bay and Sunset Beach.
- Habitat islands are created in the bay to protect the shoreline from big waves and King Tides and reduce erosion along the waterfront.
- The seawall is completely buried underneath a sloping landscape that reconnects higher and lower ground. These gentler slopes into the sea will help manage future sea level rise.
- The bathhouse is raised and renovated.
- A new concession building is added, along with more space for food carts and trucks.
- There is no bike path in the park.
- Transit route 23 stays on Pacific Street east of Jervis Street.
- Beach Avenue will be one-way west of Denman Street and will intersect with Denman Street just north of Davie Street; between Jervis Street and Thurlow Street, it will be one-way with localized traffic calming.

## 3.2 The Illustrative Vision Plan

**A consolidated waterfront design was developed through engagement with the local First Nations, public engagement, and input from the Community Advisory Group (CAG), bringing elements from each of the Weave, Carve, and Seed concepts.**

**The overarching vision for the West End waterfront is a design that continues to embody the qualities that have made it so loved over millennia, while also meeting contemporary challenges of climate change, sea level rise, accessibility, urban densification, and diverse users with sometimes competing interests. The plan strives to create capacity and opportunity with local First Nations, through consultation and at their lead, for the expression of Coast Salish culture within the design.**

### 3.2.1 Design Identity

The overall design grounds the waterfront back into its essential ecologies: Pacific coastal forest, marine and freshwater riparian, dune, meadow, intertidal, and subtidal ecologies. Feedback received through engagement with the local First Nations was centered through form, material, activity, relationships, and design elements.

The sitewide identity seeks to express a deep sense of softness, abundance, and connection through multiple means. Softness is characterized spatially by entwining and overlapping areas previously segregated by vertical walls, linear pathways, steep grades, and strict spatial boundaries. Multiple ecologies are introduced into the park that overlap one another and create vertical complexity and abundance. The foreshore is designed to shift over time with sea level rise, and linear pathways that previously separated beach from lawn now undulate through wooded grove, riparian, plaza, dune and intertidal landscapes, sometimes hovering over water and perennial plantings.

In order to maintain larger areas for ecological restoration while accommodating more space for active programs and larger group gatherings, clusters of diverse activities are alternated with zones of quiet, calm ecology. The active programmed zones overlap with built form and are designed for flexibility and a variety of seasonal uses.



# THE ILLUSTRATIVE VISION PLAN





## 3.3 Areas of the Park

### 3.3.1 Area 1 – Wooded Foreshore

*Quiet and ecological*



#### General Character

The area west of Denman between Stanley Park and Gilford Street is called the Wooded Foreshore. The design aims to preserve and heighten the existing quiet, intimate, and casual nature of the waterfront west of Denman Street with its existing small alcove beaches nestled amidst boulders and tucked against the existing seawall. The forest and intertidal ecologies of Stanley Park are connected and extended more robustly along the waterfront with wooded groves to create habitat and increase biodiversity.

As part of the larger sitewide strategy to cluster highly active uses within the park to create a balance with quieter zones of ecological repair and restoration, this area privileges ecology and has a lighter footprint.

#### Sea Level Rise

The erosive effects of sea level rise and increasing storm surge on the vertical seawall are mitigated by covering the seawall with gently sloping soils and riparian plantings that merge with raised sandy and rocky beaches, terraces that extend the intertidal zone for mariculture (the cultivation and management of marine life such as clams, mussels, and sea vegetables), and areas for lounging. Two habitat islands are introduced offshore to attenuate storm surge and wave action, while protecting the small beaches and potential mariculture zones. In consultation with local First Nations, there is an opportunity that these islands may be shaped in ways that reference Coast Salish iconography. Introduced eelgrass beds also serve to dampen storm surge along the shoreline.

#### Ecology and Planting

Covering the seawall has the added effect of reconnecting long-severed upland and foreshore ecologies with a marine riparian zone. Introduced native forest species at the canopy, understory, shrub, and groundcover level merge with robust shoreline shrubs, grasses, and perennials. Wooded groves are designed to maintain sightlines in all directions, to ensure safety and visibility to the ocean. Trees will be predominantly deciduous with some strategically placed coniferous patches, and the understory shrub species should be low for visibility out and over. Carved into the wooded zones are a pollinator meadow and lawns.



Introduced eelgrass beds provide habitat for foraging fish, invertebrates, and waterfowl.

The historic creek that once entered the ocean at Gilford Street is referenced with a robust planted swale / raingarden leading to the ocean, with native freshwater riparian plantings that clean, filter, and channel water currently flooding this area in large storms.

The habitat islands add shoreline complexity and are intended for wildlife rather than human use. The westernmost island is planted densely with native plants and trees to inhibit access and invasive plants, while the easternmost island is lower, and planted with shrubs and groundcovers that can tolerate occasional inundation. The rip rap shores of the islands stabilize the soils and break storm surge and wave action, while providing habitat for shelter, feeding and, spawning.

Healthy mature trees, including the street trees on the south side of Beach Avenue, will be maintained. It is recommended that the sidewalk on the north side of Beach Avenue is widened to accommodate large canopy street trees that can provide shade on sidewalks and south facing facades as summer temperatures continue to increase due to climate change.

## People Places

Smaller and more casual gathering on the small beaches, lawn, and lounging terraces are accommodated in this zone. The emphasis is on ecology in this area. Seating is provided at the intertidal deck on the elevated walkway, on small wood decks, and intermittently along the primary pathway.

## Multi-modal Movement

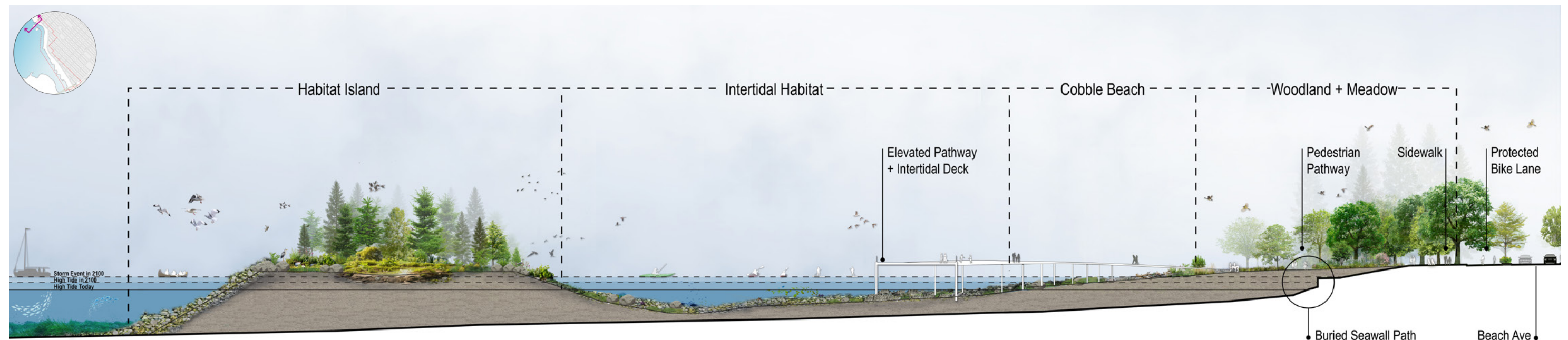
The existing pedestrian path in the park is raised and shifted north to account for sea level rise and to take people through the multiple newly introduced habitats. A new accessible elevated walkway with an intertidal deck is introduced over the water, evoking the pier that previously stood in the same location. The elevated walkway brings people over the water and intertidal zone, where they can see marine riparian habitat, rocky beach, and eel grass meadow beds from above. The kayak, canoe, and stand-up paddleboard experience will be greatly enhanced by the habitat islands and foreshore habitat.

[Right] Example of the potential complex shoreline condition of the habitat islands.  
(Image by Grant Lamont, NHC)



Two-way traffic will be introduced in this area, which will provide opportunities for TransLink to explore transit service into Stanley Park. The existing sidewalk on the south side of the street will be shifted south of the street trees into the park to protect and retain existing trees while providing space for transportation changes on Beach Avenue.

The Seaside Greenway protected bike lane continues along Beach Avenue connecting to Stanley Park to the west. It will continue to provide a safe and comfortable environment for people rolling and cycling of all ages and abilities.







artistic illustration of  
**WOODED FORESHORE ECOLOGIES [1]**





artistic illustration of ELEVATED PATHWAY OVER INTERTIDAL ZONE [2]





artistic illustration of **FLOATING WOOD PLATFORM** [3]





artistic illustration of BRIDGE OVER RAINWATER SWALE TO WELCOME PAVILION [4]





artistic illustration of PROTECTED BIKE LANE ALONG BEACH AVENUE [5]



### 3.3.2 Area 2 – The Beach, Park, and Plaza at English Bay

*Active interface between beach and neighbourhoods*



#### General Character

The Beach, Park, and Plaza at English Bay is the primary gathering space along the West End waterfront. Morton Plaza is the gateway between the waterfront parks and beaches and the West End neighbourhood. Here, multiple streams of movement converge at the Davie-Denman commercial intersection. The long, wide beach is extremely busy in the summer, and quiet and peaceful in the winter. It hosts the Celebration of Light in the summer as well as the New Year's Day Polar Bear Swim. Across Beach Avenue from the English Bay Bathhouse is Alexandra Park, a quiet, neighbourhood-oriented park with immense trees and the Haywood Bandstand.

The design provides a consolidated and accessible gateway to the waterfront at Morton Plaza, a wider plaza interface between the Cactus Club, the bathhouse, and the beach, as well as a more formalized seating zone east of the bathhouse, a larger programmable headland, and lightly integrated neighbourhood uses in Alexandra Park. This area is designed to remain a key destination for local and international visitors and provides spaces and facilities that will support commercial opportunities and events that contribute to the local economy and park vibrancy. The original softness of this place is maintained in the design's fluid forms, natural materials, and interconnection. At the lead of the local First Nations, Indigenous place naming and opportunities for expression of Coast Salish culture should be explored.

#### Sea Level Rise

In order to maintain English Bay as a usable beach that can withstand sea level rise and coastal squeeze, it is raised by 1.2 m and extended into the lower intertidal and sub-tidal zones. To contain it, the existing headland is also raised and extended. Dunes are introduced along the north threshold of the beach to protect the bathhouse from future wave runup while also introducing new habitat.

#### Ecology and Planting

A larger landscape matrix of woodland native and climate adaptive plants is used throughout this zone, increasing canopy coverage. Understorey plantings are introduced in some areas to create a more complex vertical structure while still maintaining sightlines. Existing trees in good condition are maintained, and general canopy coverage across



this area is increased, along with an understory of lower woodland plantings to maintain sightlines. New trees are introduced in Morton Park to provide shade, while maintaining ocean views. Continuous street trees are added along Beach Avenue on both north and south sides to provide shade for pedestrians while also passively cooling apartment facades in summer. Mature (greater than 30cm DBH and transportable) native cedar, maple, or Douglas fir specimens that must be removed will be offered to the local First Nations for cultural or other purposes.

Dunes are planted with the rare beach pea and dune wildrye community that thrives in this area, and riparian plant massings in the swale / rain garden nod to the historic stream that once ran from Gilford Street to the ocean. Sited at a low point along Beach Avenue, the swale enables rainwater to infiltrate and be filtered before reaching the ocean.

## People Places

### Morton Plaza

Beach Avenue and Morton Street are consolidated with the existing Morton Park into a continuous pedestrian plaza. In consultation with local First Nations, there is a major opportunity to center Coast Salish cultural expression in this area - in architecture, paving patterns, plantings, lighting, furnishings, and / or form-making. The interface between the city and the park will be a place for gathering and lingering and is designed for buskers and their audiences in the summer, as well as foot traffic in multiple directions. Soft, sinuous paving patterns delineate different zones for planting beds lined with seating, areas for small performances and events, a wet / dry plaza with water play abutting the Welcome Pavilion, the A-Maze-ing Laughter installation, wood lounging terraces, and sand zones.

### English Bay Beach

The English Bay Bathhouse facade is retained and an undulating wood amphitheatre is woven into the historic structure. The paved zone is widened to accommodate food trucks or carts, with fixed and movable tables and chairs for people to eat and linger. The plaza is lined by dune gardens that wrap around wood decks for sunbathing and beach chairs. East of the bathhouse, the slope is formalized into terraced seating interspersed with trees and shrubs. The beach functions as it does today, with logs that can be reconfigured into playful variations- from the traditional linear arrangement to semi-circles and polka dots. Two accessible paved paths extend over the beach to the shore.

### The Headland

As well as being lifted and elongated, the headland is widened to reclaim park space lost in other areas to sea level rise. A more formal plaza with a weather protective pavilion is introduced with fixed seating along the perimeter of the headland for views and sunbathing. A lawn abuts the pavilion for smaller events and performances, backed by groves of trees with understory planting. The sides of the headland are terraced and stepped intermittently with rip rap and riparian planting, to create soft nooks and larger places to sit and linger. An accessible path is created for wheelchair access to the water. Through consultation with the local First Nations, the Inukshuk at the headland will be relocated elsewhere in the city and replaced with a highly visible expression of local Indigenous culture.

### Alexandra Park

The Haywood Bandstand is shifted southwest to create a larger, more comfortable zone for audiences to watch performances, and to create a better visual relationship between the pavilion and the waterfront. The large trees in the park are preserved, the park boundary is formalized with new perimeter sidewalks, and a curvilinear, internal looped pathway that links play elements is installed amongst the trees. Woodland groundcover plantings are introduced, and a large lawn is maintained for play and for watching concerts.

A key aspect of the design is to improve the connection of Alexandra Park to the beach. This is achieved by removing the retaining wall and planter barrier along Beach Avenue and replacing it with more accessible grades, a sinuous wood seat wall, steps to the bandstand (see Section 4.4 Facilities), and wider stairs. There is an opportunity to explore continuous paving treatments from Alexandra Park, across Beach Avenue and onto the Bathhouse roof to further connect the spaces.

## Facilities

A ‘Welcome Pavilion’ is introduced within Morton Plaza that contains public, single-user, and universal washrooms and change rooms, lifeguard storage space, and a café. The English Bay Bathhouse is repurposed to showcase the façade within a larger garden and gathering space. It houses a washroom, lifeguard first aid station and storage, and space for cultural production. It is connected to Beach Avenue with an elevator. Continued consultation with lifeguard staff throughout the design process is highly recommended to ensure their needs are met.

A new weather protective pavilion is proposed on the headland to provide shade in summer, and rain protection in winter.

The Haywood Bandstand is lowered into the grade at Beach Avenue, and opened up to public access through the addition of detachable stairs that can also act as seating, and the removal of the fence around the stage.

\*For further information, see Section 4.4 Facilities.

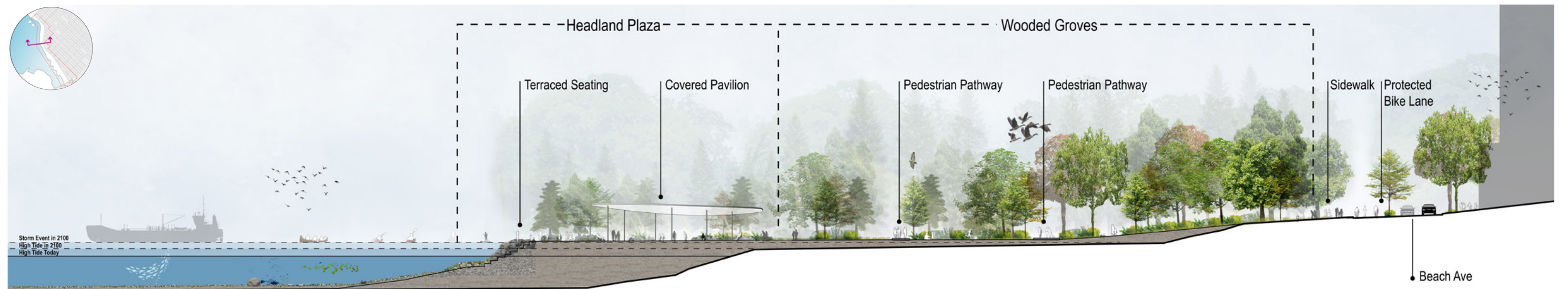
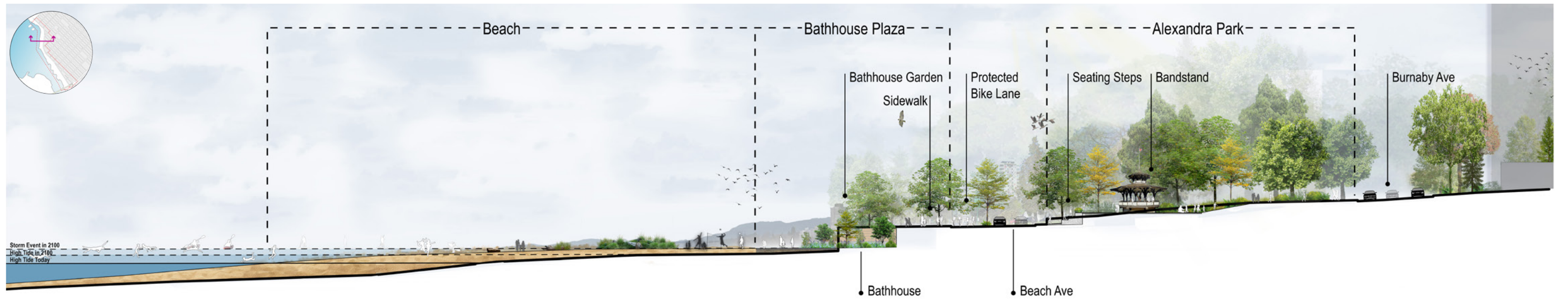
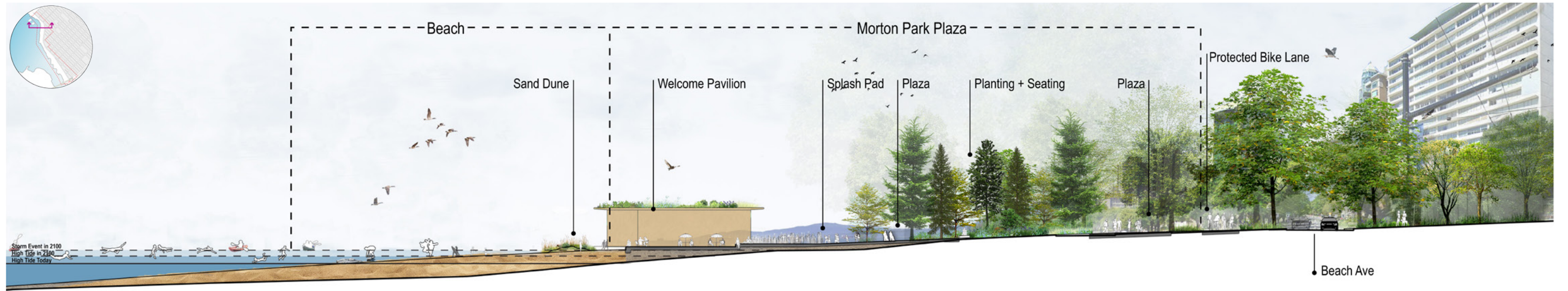
## Multi-modal Movement

The Seaside Greenway protected bike lane continues along Beach Avenue providing a safe and comfortable environment for people rolling and cycling of all ages and abilities. The accessible primary pedestrian path through the park passes through the widened ‘plaza spaces’ and connects to other secondary paths. Two wheelchair accessible routes to the beach are provided – one directly from Morton Park Plaza, and one from the headland down to the water. A universal access mobi-mat could be located in the center of the beach, and an elevator is proposed at Bathhouse to better connect Alexandra Park to the beach. Canoes, stand up paddleboards, and kayaks are able to access English Bay Beach.

Legibility is improved at the Davie-Denman intersection with the consolidated Morton Park Plaza. Vehicle and bus turning movements are simplified by realigning the road connecting Beach Avenue west of Denman Street to Davie Street. To maintain the pedestrian priority expression, the potential to extend plaza paving across the street at this location, or across the pedestrian crosswalk, should be explored. This is also the case at crosswalks connecting Alexandra Park to the roof plaza at the English Bay Bathhouse.

Seeking space through redevelopment to support changes to transportation and the public realm will continue throughout the plan timeline, especially around the Denman-Davie intersection.









artistic illustration of  
WELCOME PAVILION AND MORTON PLAZA [6]





artistic illustration of PATH TO MORTON PLAZA AND WELCOME PAVILION [7]





artistic illustration of PLAZA - BEACH INTERFACE [8]





artistic illustration of BEACH AVENUE AT ALEXANDRA PARK [9]





artistic illustration of  
**BATHHOUSE GARDEN [10]**





artistic illustration of ENGLISH BAY BEACH FROM THE UPPER BATHHOUSE GARDEN [11]





artistic illustration of ENGLISH BAY BEACH AND THE BATHHOUSE GARDEN [12]





artistic illustration of  
HEADLAND PLAZA [13]





artistic illustration of PATH TO THE HEADLAND PLAZA [14]





artistic illustration of HEADLAND PAVILION AND PLAZA [15]



### 3.3.3 Area 3 – Tidal Meadows

*Contemplative, passive, and ecological*



#### General Character

The Tidal Meadows includes the area between Bidwell and Broughton Streets. This area stresses ecological restoration with smaller more intimate gathering and interpretive spaces carved from the larger ecological zones. The major interventions include burying the seawall under gradually sloping soil to extend the intertidal zone and connect upland and foreshore ecologies along the entire length, and removing the parking lot between Bidwell and Cardero Streets to create a gentler, more accessible, and inhabitable slope. Past Cardero Street, the existing upland park zone remains as is, with the integration of more woodland planting, and the transformation of a large amount of the lawn into a camas Healing Meadow. Dennis Oppenheim's 'Engagement' sculpture and the AIDS Memorial remain in situ but are nestled into zones of lawn surrounded by more ecological plantings.

#### Sea Level Rise

To mitigate damage to the seawall caused by sea level rise and intensifying storms, the grades at the existing seawall are raised and the intertidal zone is extended with shallowly sloped sandy and rocky beaches, and terraced intertidal habitats. There is potential for consulting with the local First Nations on spaces for mariculture and tending. The elongated shallower slopes serve to mitigate storm surge.

#### Ecology and Planting

Covering the seawall reconnects upland and foreshore ecologies. Native forest species at the canopy, understorey, shrub, and groundcover levels merge with shoreline shrubs, grasses, and perennials. As in every zone along the waterfront, the forest understorey is visually open to maintain sightlines in all directions. Trees are predominantly deciduous, and it is recommended that the sidewalk on the north side of Beach Avenue is widened to accommodate large canopy street trees that provide shade and protection from the sun. Street trees are also added to the south side of Beach Avenue to shade pedestrians, cyclists, and transit riders.

To avoid losing crucial foreshore habitat as sea levels rise, some zones within the larger rocky beach are flattened and elongated using stacked boulders to increase habitat for salt marsh and foraging fish.



Opportunities for applying Coast Salish TEK (traditional ecological knowledge) in the development of these raised zones should be discussed with the local First Nations. In all zones, healthy mature trees, including the street trees on the south side of Beach Avenue, are maintained.

A healing meadow replaces a large amount of lawn. The local First Nations should be consulted to evaluate the potential to recreate camas meadow for potential tending and harvesting.

### People Places

Small, terraced outdoor rooms are tucked into the slope for casual gathering and teaching and interpretive opportunities. Mown areas within the Healing Meadow can allow for gatherings at various times of the year. Some lawn areas are maintained for picnics and sunbathing within the larger matrix of woodland and meadow.

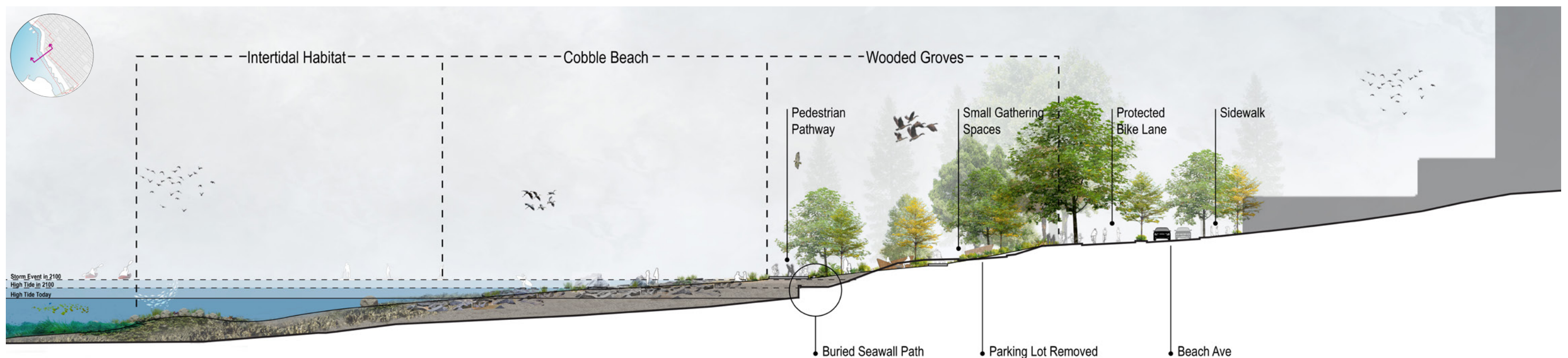
### Multi-modal Movement

The Seaside Greenway protected bike lane continues along Beach Avenue providing a safe and comfortable environment for people rolling and cycling of all ages and abilities. The primary pedestrian path connects with secondary and tertiary pathways that link the gathering spaces on the slope with a stone path that loops through the intertidal zone at low tide. Raising the pathway and smoothing the grade change along the slope results in a much more accessible segment of the overall park.

[Right] Connectivity and views to the water are key elements of the site that will be preserved and enhanced through the proposed Vision.



Non-motorized watercraft can explore the intertidal zone at high tide, where the increased biodiversity will be visible and can be experienced from a unique perspective on the water.





### 3.3.4 Area 4 – Sunset Beach and Play

*Active and programmed*



#### General Character

Between Broughton and Thurlow Streets is Sunset Beach, a series of more intimate scalloped beaches anchored by rocky groynes (a rocky barrier built perpendicular to the shoreline to check erosion and sediment drift). Two highly programmed nodes of activity are nestled within a larger woodland matrix, one at the foot of Broughton Street, and one at the foot of Bute Greenway. Both activity nodes leverage the grade change between Beach Avenue and the beach below to layer structures, programs, accessible pathways, and food and beverage. This area is envisioned as a vibrant and multi-generational space that will attract local and international visitors. Clustering active uses in close proximity in these two locations enables other areas within the larger park to provide higher quality habitat and biodiversity. At the lead of the local First Nations, opportunities for Indigenous place naming should be explored.

#### Sea Level Rise

To enable Sunset Beach to withstand sea level rise and avoid coastal squeeze, groynes and beaches are raised by 0.6 m. Unlike Areas 1 and 3, it is only possible to extend into the intertidal zone slightly due to the close proximity of the navigable channel. Beaches and intertidal zones can be extended and flattened only to the point where bathymetry of the navigable channel isn't disrupted. Beaches are extended slightly into the lower intertidal zone while also encroaching slightly inland to ensure beach widths remain consistent over a longer period of time. As sea levels rise, groynes can continue to rise and beaches can receive additional nourishment.

Dunes are introduced as a marine riparian buffer along the north threshold of the beach to protect from future wave runup and to introduce rare dune ecologies that thrive in this location.

The existing low-lying field (that was historically a sheltered inlet) is also lifted 1.2 m to improve resilience during design storm events as sea levels rise. All new buildings are built in accordance with the Vancouver Flood Construction Level standard or higher.

#### Ecology and Planting

The predominant planting in this area is an ecological matrix of woodland trees and plants to improve habitat value, absorb rainwater, draw down



carbon, and cool the urban heat island. Out of this matrix is carved gathering meadows, lawn areas, plazas, and playscapes.

Trees are predominantly deciduous and lower understory species are selected to ensure broad visibility across the site. Beach Avenue's north sidewalk is widened to accommodate shade trees, and street trees are added on both sides of the street for pedestrian, transit rider, and cyclist comfort in the summertime. Existing trees in good condition are maintained wherever possible.

Dune ecologies are clustered in zones at the top of the beaches, with wider openings for clear pedestrian circulation between the beach and programmed facilities. Riparian rainwater gardens are located at various locations along the steep slope at sites of rainwater collection.

## People Places

The existing parking lot at the foot of Broughton and Jarvis Streets is moved to the isolated triangle of land at Jarvis to make space for a child and youth play zone embedded in groves of trees and lush plantings. The street separating the triangle from the rest of the park is converted to park space, and a destination playground for natural play is located adjacent to an iconic weather protected skateboard park and small washroom facility. Children and youth are placed at the heart of the park, in relationship to one another and embedded in nature, where youth can provide mentorship for younger children.

The second and larger activity node is at the foot of Bute Street and links the Bute Street Greenway to the waterfront. The large parking lot is turned into park space with facilities. Activities are terraced from the top of the slope at the Bute Street crossing to Sunset Beach below.

Programs are layered on the building structure and tucked within steeper slopes. At the beach level is a larger plaza adjacent to a two-story building built into the slope that houses a food and beverage facility, public universal change rooms and washrooms, a lifeguard station, and park storage on the first floor. An accessible pathway leads up the slope around a brightly patterned roller plaza for roller skating. Continuing up the slope are a series of protectively fenced sport courts including a Roller Hockey court, half basketball court, and handball court located on the roof, with the second floor popping up to provide a smaller washroom facility. At the Beach Street level is a café and small plaza with bicycle parking and bikeshare connecting to the Bute Street Greenway.

To the west of the facility, the existing event lawn and steep surrounding slopes are formalized into a more accessible amphitheatre and 'Great Lawn' for large performances, festivals, and everyday seating. The smoothed and tapered bowl is designed to be soft, with integrated planting, trees, and terraced seating, with some slopes remaining open to accommodate tobogganing on rare snowy days. The event lawn is raised and designed for high impact usage and is punctuated at the southeast side with a weather protected canopy and platform / stage that can be used on non-event days for casual lounging and gathering with movable tables and chairs.

The existing Jarvis Street Pump Station remains, and a designated fitness zone with outdoor fitness equipment is integrated in the hardscape above.

Both fixed and movable tables and chairs are integrated into the plaza; around the sport courts and roller court to encourage spectators to linger, and around the Bute Street level café and plaza.

## Facilities

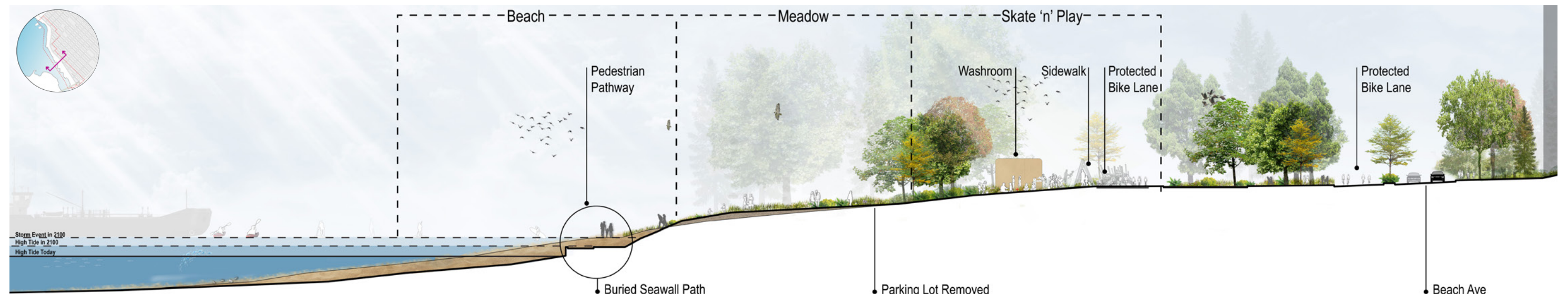
The existing concession building will be impacted by sea level rise, and is slated to be replaced by a new two story building that will house a food and beverage facility, bathhouse, washrooms, and park / lifeguard facilities and storage. Other buildings included within this area are a small café at the Bute Street intersection, a small washroom facility at the playground and skate park, and weather protective canopies over the skate park and the amphitheatre stage. Continued consultation with lifeguard staff throughout the design process is highly recommended.

\*For further information, see Section 4.4 Facilities.

## Multi-modal Movement

Beach Avenue vehicular traffic from Burrard Street to Jarvis Street will remain one-way alongside a protected bike lane. A separated, accessible walking and cycling path is brought through the park to connect the Bute Street Greenway and False Creek Seaside Greenway bike path. A continuous protected bike lane on Pacific Street extends from Burrard Bridge to Beach Avenue. The segment of Beach Avenue roadway between Broughton and Jarvis Streets is eliminated to create more park space, and to improve the sense of connectivity with the overall waterfront. The Seaside Greenway path is taken through the park in this location and reconnects with the roadway at Broughton and Jarvis Streets. The primary pedestrian path connects with secondary pathways that lead to each activity node and to Beach Avenue.

Canoes, stand up paddleboards, and kayaks can access Sunset Beach. The primary path has vehicular grade paving to accommodate truck delivery of larger racing canoes for canoe races or other watercraft events.







artistic illustration of  
**BROUGHTON STREET SKATE 'N PLAY [16]**





artistic illustration of  
SUNSET BEACH PLAZA [17]





artistic illustration of SUNSET BEACH CONCESSION AND PLAZA [18]





artistic illustration of SUNSET BEACH - PLAZA INTERFACE [19]



### 3.3.5 Area 5 - Under the Bridge

*Informal, neighbourhood-scaled portal*



#### General Character

While much of the character and design of this area will be dependent on the separate design process for the Vancouver Aquatic Centre, the area under and adjacent to the bridge is intended to be a neighbourhood scaled, gardenesque gateway to False Creek and the West End waterfront. The lofty, industrial structure of Burrard Bridge is celebrated, as is the proximity to Seḥákw / səháʔqʷ across the water.

#### Sea Level Rise

This section of shoreline is relatively protected from wave-induced flooding but will experience coastal squeeze due to sea level rise. The groyne in this area is raised 0.6 m and the adjacent beach is extended slightly with beach nourishment, however the proximity of the navigable channel on the east end limits extending the beach further out. The new Vancouver Aquatic Centre will need to be built to the Flood Construction Level or higher unless there are special structural provisions for building within the flood zone.

#### Ecology and Planting

With future deconstruction of the Vancouver Aquatic Centre, many of the adjacent mature trees will be removed. Any trees in good condition that can viably be saved should be maintained and form the framework for new woodland groves planted around the new facility. The treed groves should open up adjacent to the Burrard Bridge to maintain open visual connectivity and brightness under the bridge, and a sense of safety.

The existing community-managed garden below Burrard Bridge should be maintained and supplemented with native and adapted planting into an expanded Food and Culture Garden. Keeping the existing gardens is a testament to the love and labour that has gone into the gardens over many years.

Intertidal plantings should be incorporated into the dog park and at the interface between the beach and upland areas. New marine 'habitat shelves' are proposed along the southwest perimeter of Burrard Bridge's underwater abutment to create nooks and crannies for sea life to propagate, and to provide habitat for foraging fish.



## People Places

The area's existing well-tended community gardens are expanded and integrated with a community table, seating areas, play structures, and a tiered and expanded dog park. The intention to retain and potentially expand the existing gardens is subject to the Vancouver Aquatic Centre project. The dog park is separated into areas for large and small or shy dogs and sightlines to and from the dog park are improved.

Sightlines and access from Beach Avenue into the park would be greatly improved if the solid abutment wall of Burrard Bridge could be made more permeable contingent on future feasibility studies conducted by the City of Vancouver, and with improved lighting that celebrates the bridge's scale and industrial structure. Opening up east / west views within this space will also be important to increasing a sense of openness and connection under the bridge.

The elevated path gives a new on-the-water experience to pedestrians and cyclists alike, with an area to linger and enjoy views of Seḥákw / səháʔqʷ, Granville Island, and the passing watercraft.

Envisioned is a more open site relationship with the future Vancouver Aquatic Centre, with more visual porosity for site safety and activation, and indoor / outdoor programs that celebrate water and being on the waterfront.

## Facilities

There is opportunity for a small Boat Pavilion that punctuates the elevated path that could be used for canoe and kayak storage or rental, and a café. The future Vancouver Aquatic Centre will be developed through a separate design process.

\*For further information, see Section 4.4 Facilities.

## Multi-modal Movement

Watercraft and proximity to Seḥákw / səháʔqʷ is celebrated with an accessible elevated walkway over the water that holds the Aquatic Centre dock, a launch site for canoes and kayaks, and the proposed Boat Pavilion. The primary pedestrian path travels along the edge of the shore, and a secondary path extends over the water to connect to the ferry pier and Boat House. The dog park and paths are all accessible.

The Seaside Greenway protected bike lane continues along Beach Avenue, and a second recreational bike path loops over the water on the elevated pier to give cyclists an on-the-water experience. The bike path connects the Bute Street Greenway and Beach Avenue to the False Creek Seaside Greenway bike path.

The section of Beach Avenue will continue to operate as a one-way westbound only for vehicular and bus traffic. Bus movements will now be focusing on Pacific Street, although there could be interim bus routes and bus stops to support construction and ongoing implementation of the plan. Pacific Street will be improved with street trees and widened sidewalks on the north side that provide more shade for pedestrians.

Opportunities to improve the pedestrian connection north of Beach Avenue to the Burrard Bridge will be explored. If possible, potential upgrades that could help with wayfinding to the bridge stairs could include expanding the existing community gardens along the path to create a more pleasant and visible linkage and / or improving the lighting and signage along the path.

Seeking space through redevelopment to support changes to transportation and the public realm will continue throughout the plan timeline, especially along Pacific Street.





artistic illustration of BOAT PAVILION [20]



# 4.0 PLAN COMPONENTS



## 4.1 Resilience, Coastal Adaptation, and Ecology

The West End waterfront will continue to experience major impacts from a changing climate and rising sea levels. Intensifying weather events such as atmospheric rivers, extreme wind, extreme heat events, and drought will continue to impact the park through flooding, erosion, infrastructural collapse, and loss of biodiversity.

*Imagine West End Waterfront* recommends multi-functional, climate adaptive, and nature-based design solutions that increase ecological resilience throughout the park while also addressing multiple other environmental, social, and economic challenges.



# STRATEGIES FOR COASTAL RESILIENCE AND ADAPTATION





## 4.1.1 Sea Level Rise

Relative sea level rise (the combined effect of global sea level rise and local land subsidence or uplift) considered for the West End waterfront is 0.6 m for year 2050 and 1.2 m for year 2100. This includes an allowance of 1.0 m for global sea level rise and 0.2 m for local land subsidence. Sea level rise will both increase the mean water level and also the frequency of high water level events. Wave heights and wave run-up on the shoreline are anticipated to increase.

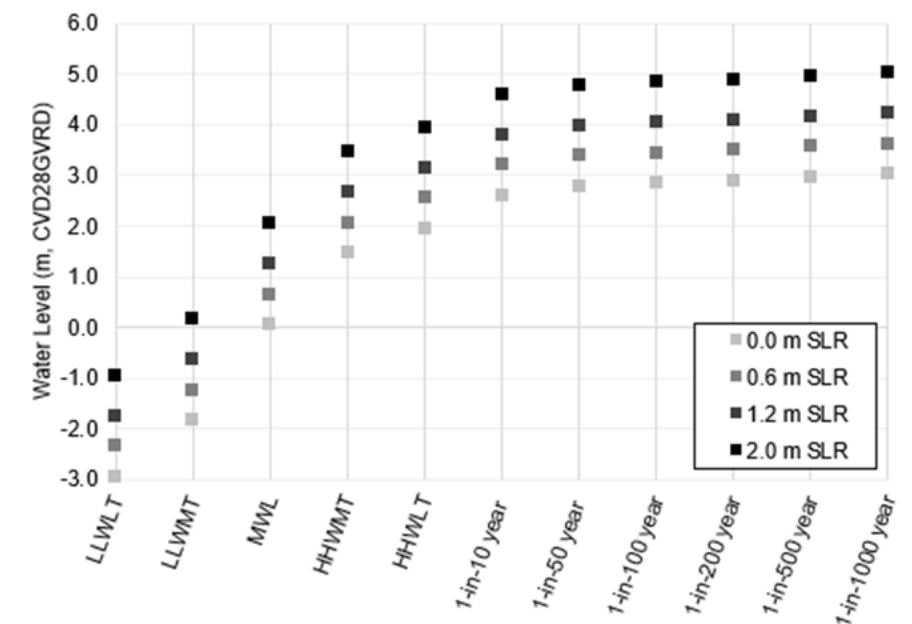
Shoreline conditions along the site include discontinuous sections of riprap revetment, stretches of vertical seawall structures, and two expansive sand and gravel beaches (English Bay Beach and Sunset Beach) partially anchored in place by rock groynes.

As sea levels rise, the intertidal zone will experience coastal squeeze and the existing lower intertidal area will become sub-tidal. Upland areas in low-lying areas, such as the area close to Gilford Street and the grassy field at Sunset Beach, may experience significant wave-induced flooding and flood related consequences. Beaches will be inundated with increasing frequency, and after 1.2 m of sea level rise, much of the existing beaches will be underwater at high tide, limiting usable public space. The current groyne structures at Sunset Beach may not be sufficiently high to maintain the current beach configuration as sea levels rise, adding to already existing beach erosion. Wave run-up will reach the English Bay Bathhouse and lower levels of the Cactus Club Café building. The Sunset Beach concession building would be underwater, and the Vancouver Aquatic Centre would be below flood levels.

The seawalls, revetments, and beaches will be exposed to additional wave forces as sea levels rise. Vertical seawalls reflect wave energy instead of dissipating it, which can increase the velocity of the wave as it travels down the wall, causing scouring at the seawall footing, increased frequency of wave overtopping, and upland flooding along the seawall. This can lead to structural failure of the seawall and further upland and intertidal erosion. Increased wave energy would also be capable of transporting larger materials (such as rocks, large logs, etc.) along the shoreline, causing erosion and storm damage in areas previously not susceptible, as well as endangering the public.

The Vision Plan leverages nature-based design solutions that increase resilience throughout the park while having the added benefits of countering coastal squeeze to increase overall park space, increasing ecological habitat and biodiversity, and creating a much more complex and engaging park experience that connects people more deeply to nature. Nature-based approaches to mitigating sea level rise, storm surge and wave run-up include:

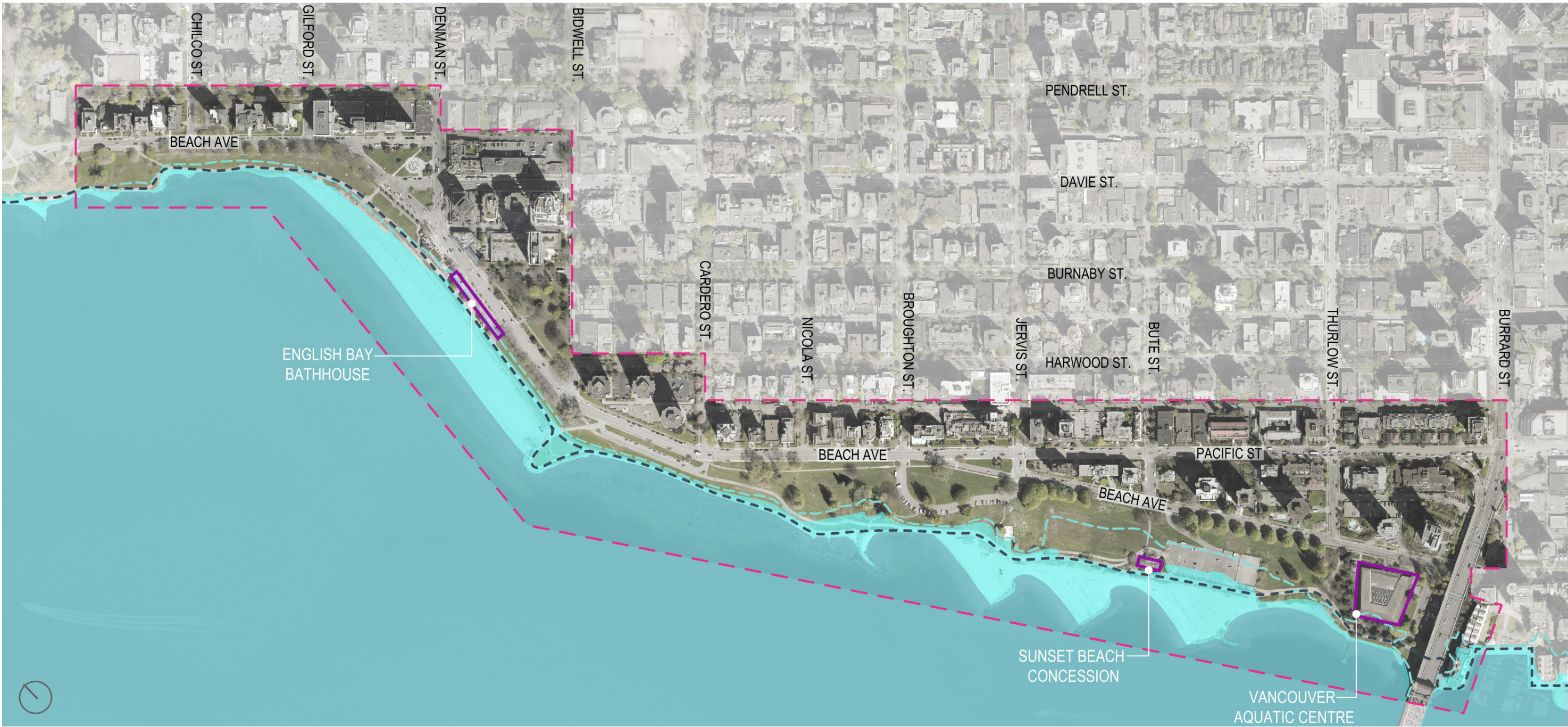
1. Elevate beaches and specific areas of park space between 0.6 – 1.2 m; add beach nourishment; and raise and extend groynes, headland, and revetments. Areas that are easily raised after 2050 can be raised 0.6 m, while more critical elements should be raised by 1.2 m.
2. Cover vertical seawalls with gently sloping soils that extend and connect the upland and intertidal zones. Shallower slopes, planted with eelgrass and more riparian plantings, serve to mitigate storm surge and protect the intertidal zone from coastal squeeze.
3. Extend the intertidal zone with terraced benches of salt marsh, potential mariculture such as clam gardens (in consultation with the local First Nations), rocky beaches, and eel grass beds beyond. This protects against erosion and storm surge by stabilizing sediment and slowing wave energy.
4. Introduce habitat islands that mitigate storm surge and protect the beaches and intertidal ecologies beachside.
5. Introduce marine riparian buffer and dune ecologies, with year-round vegetation, to help reduce wave run-up and wave-induced flooding.
6. Move critical infrastructure above the Flood Construction Level.



[Above] Range of design water levels with sea level rise allowances. (Note that design water levels do not include any wave effects)



**EXTENT OF PROJECTED SEA LEVEL RISE ON SITE**



**LEGEND**

- Mean high tide water level in 2023
- 1-in-200 storm event at high tide with 0.6m sea level rise projected for 2050
- 1-in-200 storm event at high tide with 1.2m sea level rise projected for 2100
- Existing Seaside Greenway pathway
- Existing facilities



## 4.1.2 Rainwater Management

Climate change combined with sea level rise will result in increased rainwater run off volumes. These volumes will be generated across the contributing watershed as well as within the project site, and in both minor and major storm events. With existing stormwater infrastructure and design, this runoff will contribute to surcharged storm sewers, erosive overland flow pathways, and poor water quality discharging into English Bay.

Rainwater management infrastructure (both storm sewer network and green / grey best management practices) will need to be sized with future precipitation effects in mind. Much of the underground infrastructure in the catchment is undersized at present, which will continue to be exacerbated in the future. The majority of this infrastructure was constructed between 1950 and 2000 and has a serviceable life of approximately 50-75 years. Therefore, it is anticipated that much of the underground infrastructure will exceed its serviceable life in the near future. Storm sewers will have to be replaced and / or upgraded to achieve the required level of service for the project area. Upgrading those pipes will require significant capital expenditure as well as disruption of the project site during construction. A combination of green and grey best management practices (BMPs) will help in mitigating the effects of the increased rainfall and allow the City to defer upsizing the pipes until sites within the park are improved.

The typically poor quality of urban runoff creates a barrier to daylighting stormwater outfalls within the park. Daylighting stormwater outfalls would require prior treatment to protect the public from potentially contaminated water. At the watershed scale, stormwater should be filtered and cleaned before entering pipes to ensure water entering English Bay from pipe outflows is clean. Where feasible, biofiltration swales and other best management practices are integrated at strategic locations to capture and filter rainwater before it enters pipes.

The Vision Plan's recommendations are consistent with guidance provided by the City of Vancouver's Rain City Strategy and supporting studies and reports. The first 48 mm of rainfall volume from the project site will need to be captured and retained using infiltrating BMPs. The first 48 mm of rainfall from all impervious and pervious surfaces will be captured and cleaned to ensure 80% removal of total suspended solids by mass prior to discharge from the site. Peak flow control is not required

for catchments discharging directly to the ocean. Any developments within the project site discharging to the storm sewer system will be required to meet the City's target that the post-development peak flow rate to the storm sewer must be lower than or equal to the pre-development conditions.

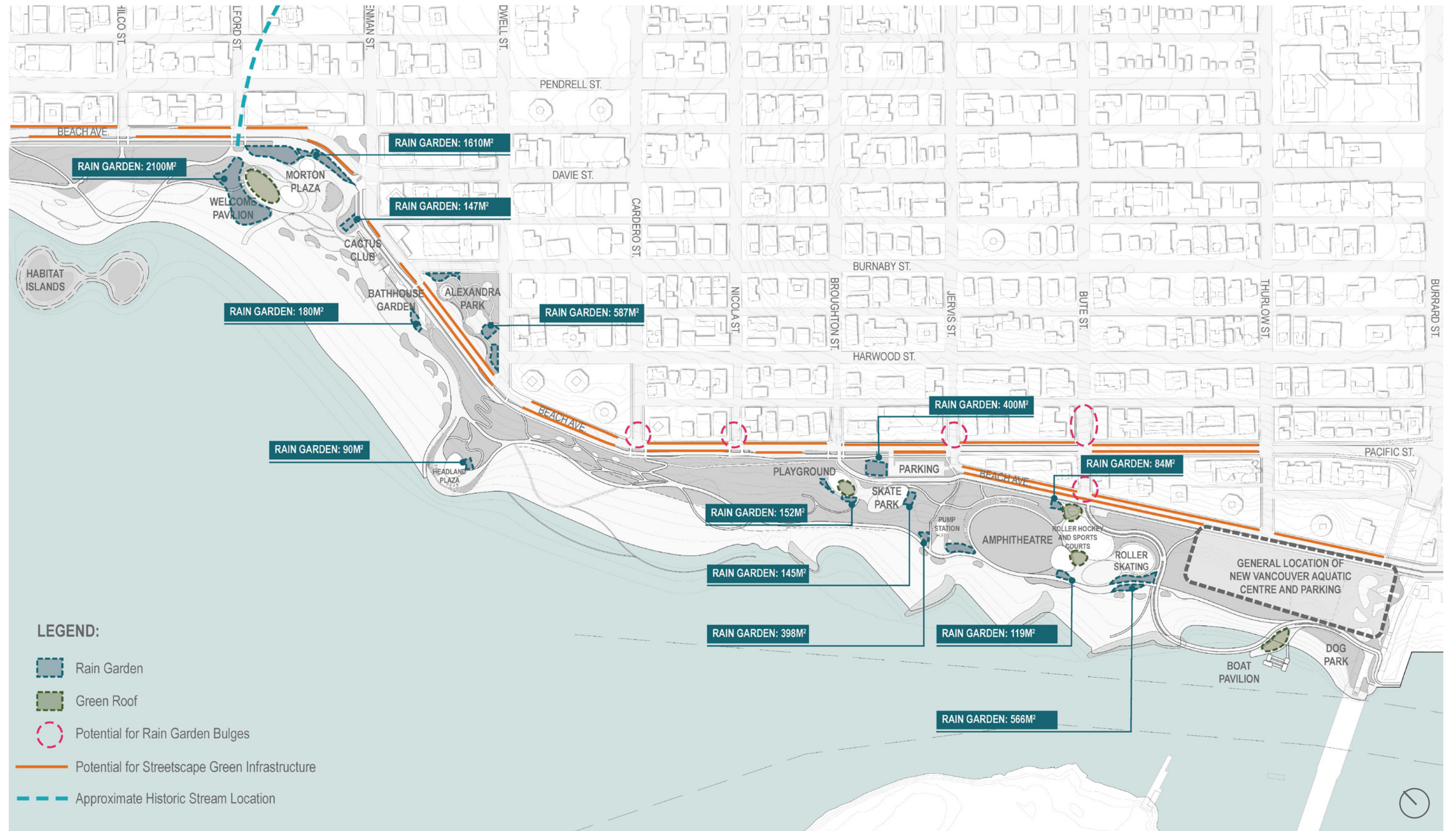
Green / grey infrastructure is recommended both within the bounds of the project site and throughout the watershed as well in order to reduce flow and volume, improve water quality, and to enhance the performance of the two green / blue corridors identified by the City: Cardero and Bute Streets.

Stormwater interception and retention is included at both the site and watershed scale through:

1. Throughout the park, tree canopy and ground level vegetative complexity is increased to slow and absorb flows.
2. Rain gardens and biofiltration swales are incorporated within the plan to slow, store, filter, and infiltrate rainwater. Rain gardens are introduced along the length of Beach Avenue to collect rainwater and filter out particulates, inorganic and toxic pollutants that are common from vehicular emissions before the water flows into English Bay. These rain gardens are enlarged at three low points along Beach Avenue: at Gilford Street, Bute Street, and Burrard Street. At Gilford Street, a larger riparian swale is planted to trace the path of the historic creek that once outfell at Gilford Street. A series of terraced bioswale rain gardens are integrated into the steeper slopes at Bute Street, and water is collected into planted swales that supplement the Culture and Food garden under Burrard Bridge.
3. Green roofs are integrated on new buildings to slow, absorb, and evapotranspire rainwater.
4. Subsurface rainwater detention such as structural soil and soil cells can be considered below new street trees along Beach Avenue to slow and store rainwater.



# RAINWATER MANAGEMENT AREA MAP





## 4.1.3 Ecology and Planting

After millennia of stewardship and cultivation of upland and foreshore ecologies by the local First Nations, settler alteration of the West End shoreline and decades of recreational use have severed the relationships between diverse waterfront ecologies and degraded habitat and biodiversity along the waterfront.

The West End waterfront parks must balance the need for ecological function with recreational demand. By clustering highly activated uses in easily accessed sites, the Vision Plan creates more space for the restoration of more diverse native upland and intertidal ecologies within the park.

### Upland Ecology

The West End waterfront was a highly productive and structurally complex coniferous forest of western hemlock, cedar, and douglas fir with a creek that outfell at Gilford Street, and camas meadows and berry clearings. Trees, shrubs, groundcovers, and subsurface fungal networks created a community of plants used for food, medicine, textiles, transportation, housing, clothing, and more. The plants as well as plant relationships held great cultural significance to local First Nations.

The Biogeoclimatic Ecosystem Classification system classifies this coniferous forest as CWHdm, the Coastal Western Hemlock Dry Maritime Subzone. The area was logged and developed in the early 20th century, and vegetation on site is now typified by a vast expanse of grass with scattered ornamental and native trees mostly concentrated along the park edges. Heavily managed ornamental gardens and community gardens provide low habitat value for wildlife. The landscaped areas provide ground cover and a variety of forage but are fragmented and uncommon across the parks. The lack of larger tracts of natural plant communities limits nesting opportunities for ground nesting species, cavity nesters, and those species requiring more protected cover or undisturbed habitat.

#### 1. Create a matrix of native and climate adapted woodland.

A sitewide matrix of native and climate adapted woodland is created, out of which gathering spaces and other ecologies are carved. Creating a continuous treed matrix with understory shrubs

and groundcover has several co-benefits. It increases the amount of functioning habitat with both vertical and horizontal species complexity; creates corridors for species movement; increases the overall urban canopy; cools the urban heat island; absorbs and filters urban storm runoff to clean and cool it before entering English Bay; provides shade in Vancouver's increasingly hot summers; and draws down carbon from the atmosphere. At woodland edges, berry patches are integrated for foraging. In all areas of the park, understory plantings are selected to maintain sight lines and visibility for safety and security.

Additional habitat elements added into the woodland close to Stanley Park such as raptor perches, logs, stumps, and boulders provide habitat and protection for wildlife.

#### 2. Re-establish freshwater riparian vegetation.

Freshwater riparian ecologies provide a variety of functions that are beneficial to terrestrial animals, fish, and aquatic life such as controlling erosion; slowing, filtering and infiltrating rainwater flows; providing shade and food for organisms; and maintaining biodiversity.

The intersection of Beach Avenue and Gilford Street, which was once the outfall location of a historic creek, is still the site of flooding during larger storm events. A swathe of native riparian plants connects the upland woodland to the foreshore on the west side of Morton Plaza. Similar plant communities are planted in raingardens and biofiltration planters at Bute and Burrard Streets.

#### 3. Introduce pollinator / camas meadows.

Pollinators perform critical roles in our ecosystems, transferring pollen from plant to plant ensuring their reproduction and the production of fruits, berries, and seeds. Pollinator species include many insects such as bees and butterflies, and birds such as hummingbirds. Installing plant communities that support pollinator species will promote biodiversity in the park. Several pollinator meadows are proposed across the site, which can at times be mown to be used for programming. This improves the habitat value of these areas, particularly for pollinators and small mammals. There is an opportunity, in consultation with local First Nations, to reinstate camas meadows in the area for cultivation.

Pollinator meadows have co-benefits including cooling summer air temperatures, maintaining moisture in soils for longer periods of time, helping trees during periods of drought, they have less carbon emissions during maintenance, and they create seasonal beauty with choreographed blooms and winter texture.

### Foreshore Ecology

Today, the West End waterfront is a semi-exposed, highly modified shoreline characterized by a mixture of sand, rip rap, and cobble intertidal habitats with no large areas of valued habitat. A large percentage of the shoreline consists of hardened man-made structures including rock armouring and concrete and stone seawalls with minimal riparian vegetation overhanging the shoreline. The intertidal zone is composed of various rip rap features including berms that extend from the upper to lower intertidal zones, intermixed with varying degrees of sand, cobble, and boulder. Biobands typical of the region occur on immobile substrates such as rip rap and boulders. The Vision Plan includes the following sitewide strategies for restoration of the foreshore:

#### 1. Expand intertidal zones

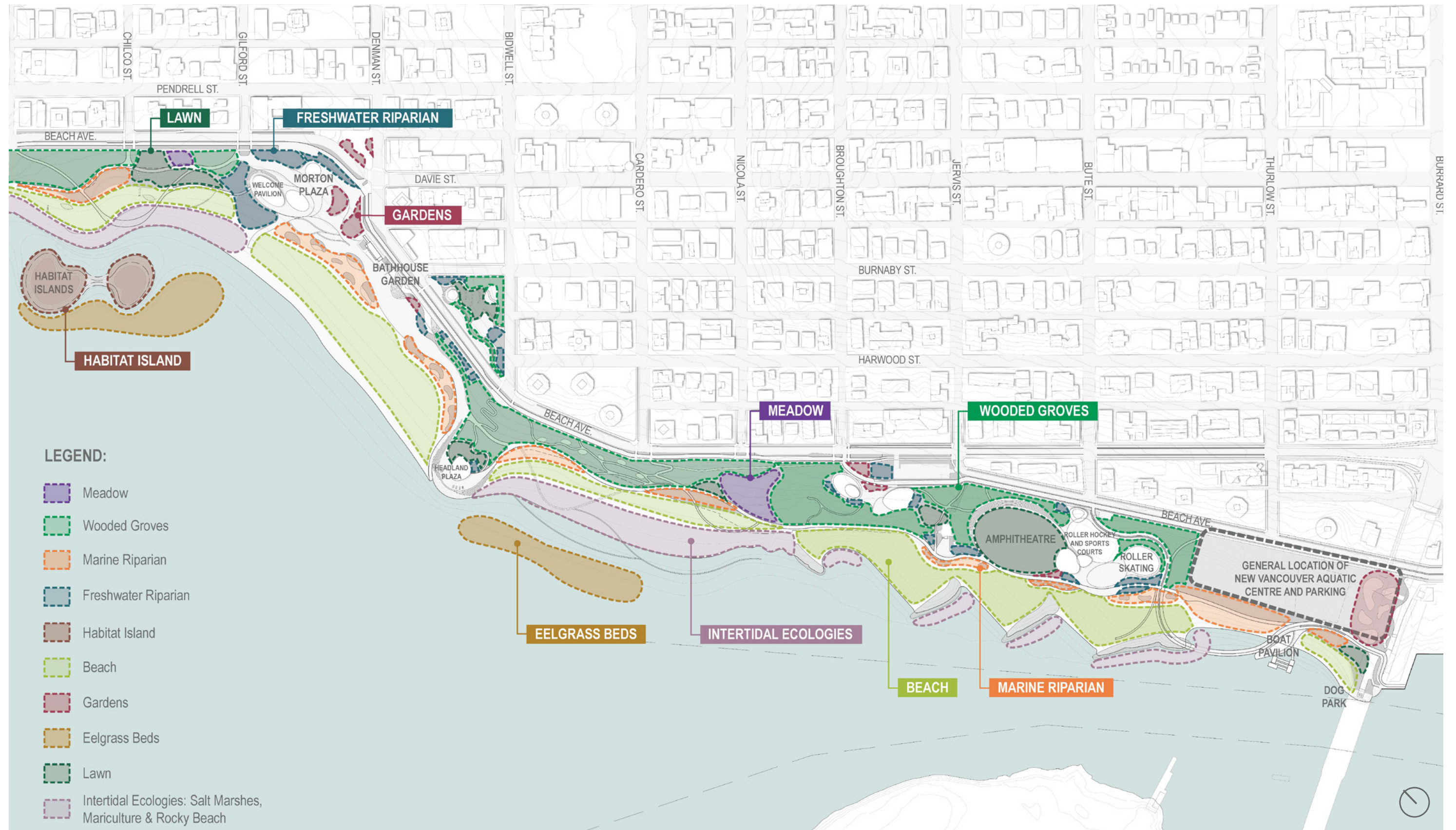
Covering seawalls and riprap revetments with more gentle vegetated slopes expands the intertidal zone and allows it to migrate upland as sea levels rise, enabling long-term resilience. Seawalls obstruct the natural inland migration of coastal systems in response to sea level rise, causing coastal squeeze. This process causes a reduction in the area of intertidal habitats such as sandy beaches and saltmarshes because these environments are trapped between a rising sea level and unmoving, hard defences. Covering the seawalls with gently sloping habitat enables habitat migration, a naturally occurring ecological process, to occur over time, enabling the intertidal zone to survive long term sea level rise.

#### 2. Increase habitat connectivity

Intertidal ecosystems are biologically diverse communities that provide a vital link between marine and terrestrial environments. Shoreline areas provide upland, intertidal, and subtidal species with food, refuge, protection, travel corridors, and nursery sites. Covering the seawalls with more gentle slopes also enables upland, backshore, intertidal, and subtidal zones to be reconnected.



# ECOLOGICAL TYPOLOGIES MAP





**3. Increase marine riparian vegetation.**

Marine riparian plant communities are reintroduced to absorb and filter rainwater; anchor soil and protect from erosion; create habitat structure for roosting, nesting, spawning and breeding, refuge, migration, and foraging opportunities; shade and cool intertidal organisms from desiccation; and supply organic debris and insects for the intertidal food web. Upper beach areas are reinforced in strategic areas with sand dunes planted with the red-listed dune wildrye – beach pea plant community. Dune wildrye is also planted along the groynes at Sunset Beach due to its dense rooting system that anchors sediments which provides increased resilience against storm surges and rising tides.

**4. Introduce intertidal habitat benches.**

Intertidal habitat benches constructed at appropriate tidal elevations will enable expanded salt marshes, potential mariculture such as clam gardens (in discussion with local First Nations) and eel grass meadows. Habitat benches should incorporate sea level rise predictions and may need to be maintained and shifted upland as sea levels rise. Further field assessments and background research should be done in following phases to assess existing biological conditions, substrate, and hydrological conditions to determine the most feasible locations for each habitat type.

**5. Re-introduce eelgrass meadows and salt marshes.**

Eelgrass beds have high biological productivity and provide important nursery habitat for salmon, crab, and other marine organisms. Salt marshes are proposed in protected zones closer to False Creek, which was once a major regional salt marsh habitat. Salt Marsh supports migratory birds, provides critical habitat for young salmon, sequesters carbon, and plays an essential role in flood prevention. Site feasibility assessment and pilot area transplants should be conducted and monitored to assess the feasibility of both eelgrass and salt marsh transplants in protected subtidal zones across the waterfront.

**6. Incorporate rocky reef construction / enhancement of seabed to support kelp.**

Construction of rocky reefs at appropriate depths can create attachment habitat for marine vegetation such as kelp and provide forage and refuge habitat for reef dwelling fish species (e.g., rockfish). The easterly habitat island is envisioned as a rocky reef subsurface.

**7. Laminate existing vertical structures with subtidal and intertidal habitat wall panels.**

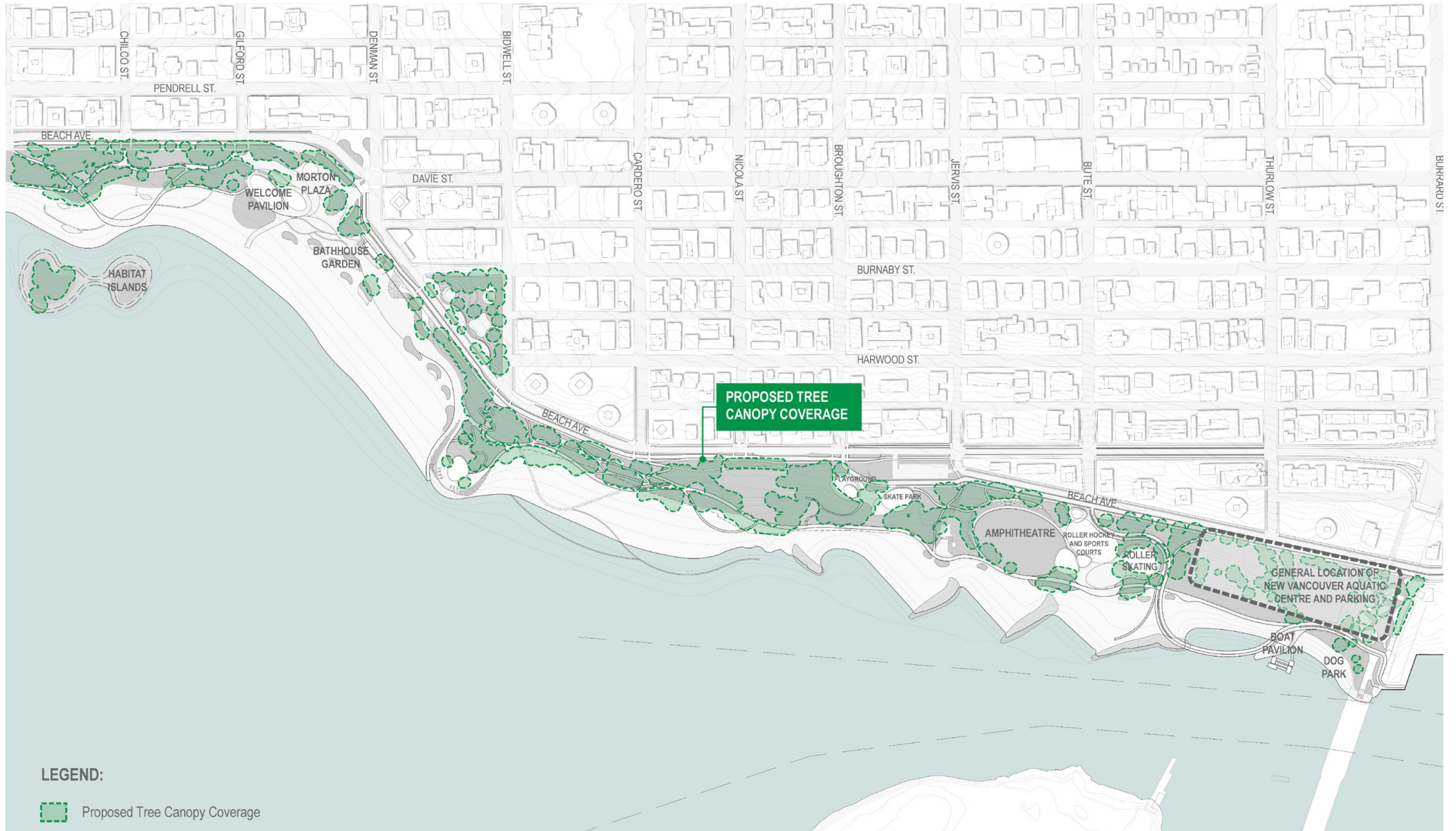
Precast concrete panels with marine surface textured habitat shelves for algae, shellfish, starfish, and other species to inhabit, and to provide food and shelter for foraging and juvenile fish. These panels may be considered for application to the Burrard Bridge abutment where the navigable channel makes it difficult to make any other habitat improvements.

**8. Choreograph marine refuge areas.**

To protect intertidal habitats at key times, some areas should be declared temporary marine refuge areas that restrict public access while they become established, and perhaps seasonally, to protect spawning events, migration periods, or other ecological processes. Public information and potential annual events could increase public support and engagement with the ecological life of the park.



# TREE CANOPY COVERAGE MAP



**LEGEND:**

 Proposed Tree Canopy Coverage



## 4.2 Streets and Connectivity

### 4.2.1 Pedestrian Network

The pedestrian network consists of interconnected park pathways, street sidewalks, and safe crossings. Amenities such as seating will also be located along the network to create a welcoming, comfortable, and enjoyable experience suitable for all ages and abilities. The network has been developed to provide access to key destinations as well as creating an experience that enhances connection to the water and natural areas.

Increasing summer temperatures necessitate walkways that provide shade. Providing appropriate soil volumes will enable larger tree canopies that can protect from summer heat while providing multiple co-benefits.

#### Park Pathways

Pedestrian pathways are provided throughout the park. A network of primary, secondary, and tertiary pathways has been developed to provide continuous, interconnected access to destinations as well as creating a comfortable experience that strengthens connections to nature and public life.

The fully accessible primary pedestrian pathway is located close to the shoreline and connects to the Stanley Park and False Creek Seawall. It undulates gently through multiple ecological conditions while providing one continuous path experience through the park. Secondary pathways connect to all key intersections throughout the park as well as all amenities. These paths provide optional routes to explore subzones of the park, and to provide unique experiences such as the elevated walkways over the intertidal zones at each end of the park. Accessible paths have been increased where possible into the park, and five accessible secondary pathways enable wheelchair users to reach the intertidal zone at multiple beaches. Tertiary meanders are more intimate paths and connect people through more robust ecologies: the intertidal zone at low tide, over a riparian garden, and to steeper sloped connections from Beach Avenue into the park. The overall intention is to increase porosity of the park, and guide circulation to enable the protection of ecological zones.

#### Sidewalks

Sidewalks are provided along the edges of the park and on the streets connecting to the park. To enhance gateways into the park, additional signalized crossings are proposed at Bute and Broughton Streets. Other opportunities to enhance crossings along Beach Avenue and Pacific Street will be explored.

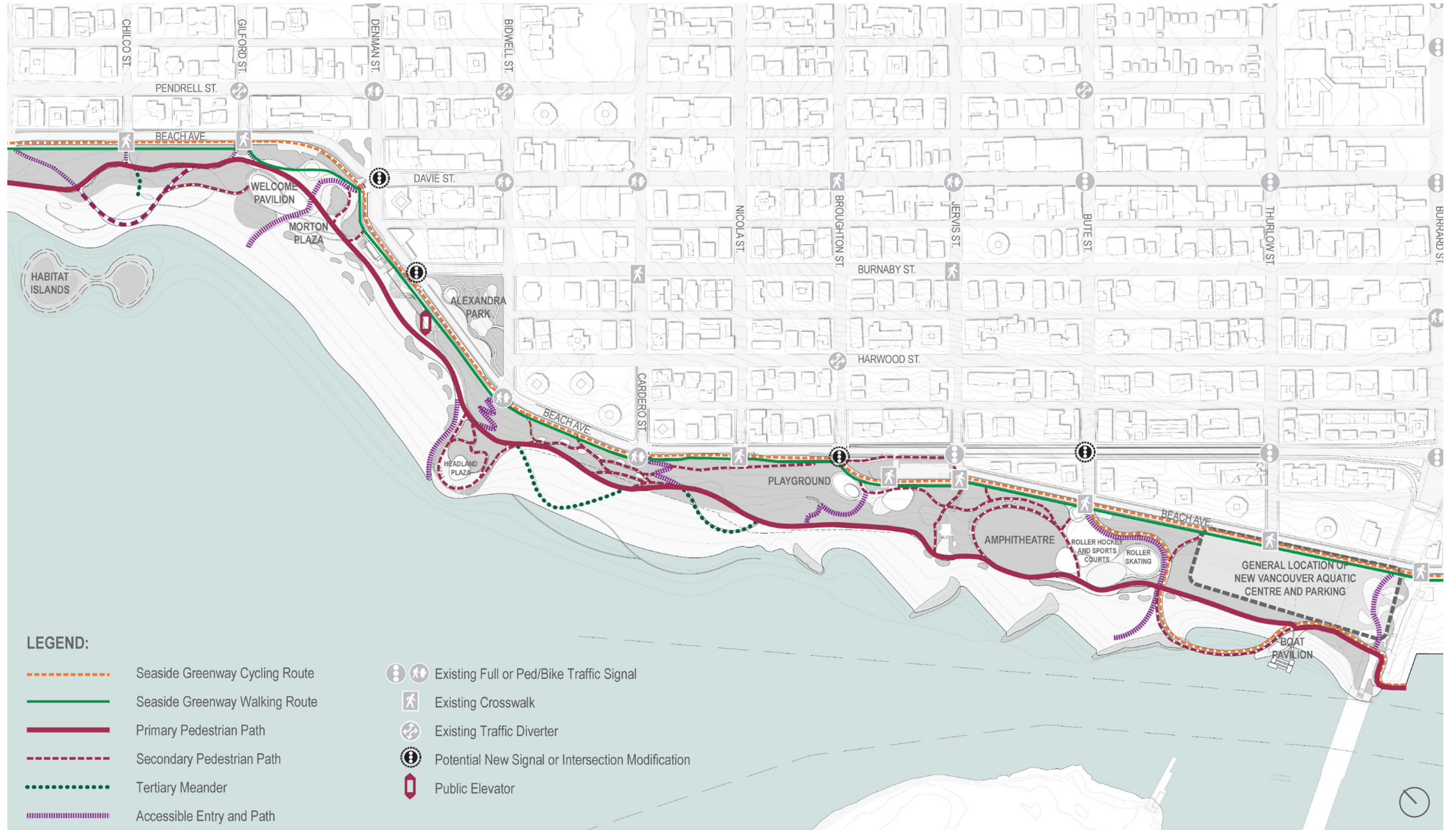
Gateways and accessible pathways into the park are provided at Bute, Jervis, Broughton, Bidwell, Davie-Denman, Cardero, and Chilco Streets. Gateway nodes provide universal access to major destinations in the park, provide enhanced public space, and provide connections to transit, multimodal mobility, and accessible parking. This includes the realigned Davie-Denman intersection (and Morton Plaza), Bute (and plaza), and Broughton (and playground and skate park).

The realignment of the Davie-Denman intersection will provide additional and more connected park space. This intersection will be a signature entry into the park and, contingent on future study, the option of a pedestrian scramble crossing could simplify and prioritize pedestrian routes into the park from Denman and Davie Streets.





# PEDESTRIAN NETWORK MAP



## LEGEND:

- Seaside Greenway Cycling Route
- Seaside Greenway Walking Route
- Primary Pedestrian Path
- Secondary Pedestrian Path
- Tertiary Meander
- Accessible Entry and Path
- ⓘ  
Existing Full or Ped/Bike Traffic Signal
- ⤴  
Existing Crosswalk
- ⤴  
Existing Traffic Diverter
- ⓘ  
Potential New Signal or Intersection Modification
- ⬆  
Public Elevator



## 4.2.2 Cycling Network

The cycling network is made up of on-street routes and a section of the Seaside Greenway which connects through the park and is integrated with end of trip facilities and other modes including transit. The network will provide a safe and comfortable cycling environment for people of all ages and abilities through separation from people walking and driving, to create an enjoyable park experience, and to connect with the wider city cycling network.

### Street Cycling Network

The Beach Avenue protected bike lane (Seaside Greenway) serves as the main cycling route through the site. The project formalizes this route as an AAA on-street cycling connection with enhanced space to move, pass, and ride side-by-side. The bike lane increases the separation between sidewalk and roadway users through the use of planted buffers. This helps create comfort and safety for all road users, as well as opportunities for further greening and amenities within the street environment.

The plan also proposes to complete the protected bike lanes on Pacific Street from Thurlow to Jervis Street. This fills an existing gap in the cycling network that will connect the West End waterfront with Yaletown, False Creek, and neighbourhoods in East Vancouver. An important consideration is the transition point for unidirectional bikeways on Pacific Street and the bidirectional bikeway on the south side of Beach Avenue. A protected intersection at the Beach Avenue and Broughton Street intersection will comfortably transition users to the Seaside Greenway and into the park. The Broughton Street intersection has fewer physical constraints with shallower grades, fewer mature trees, and less property access than other locations.

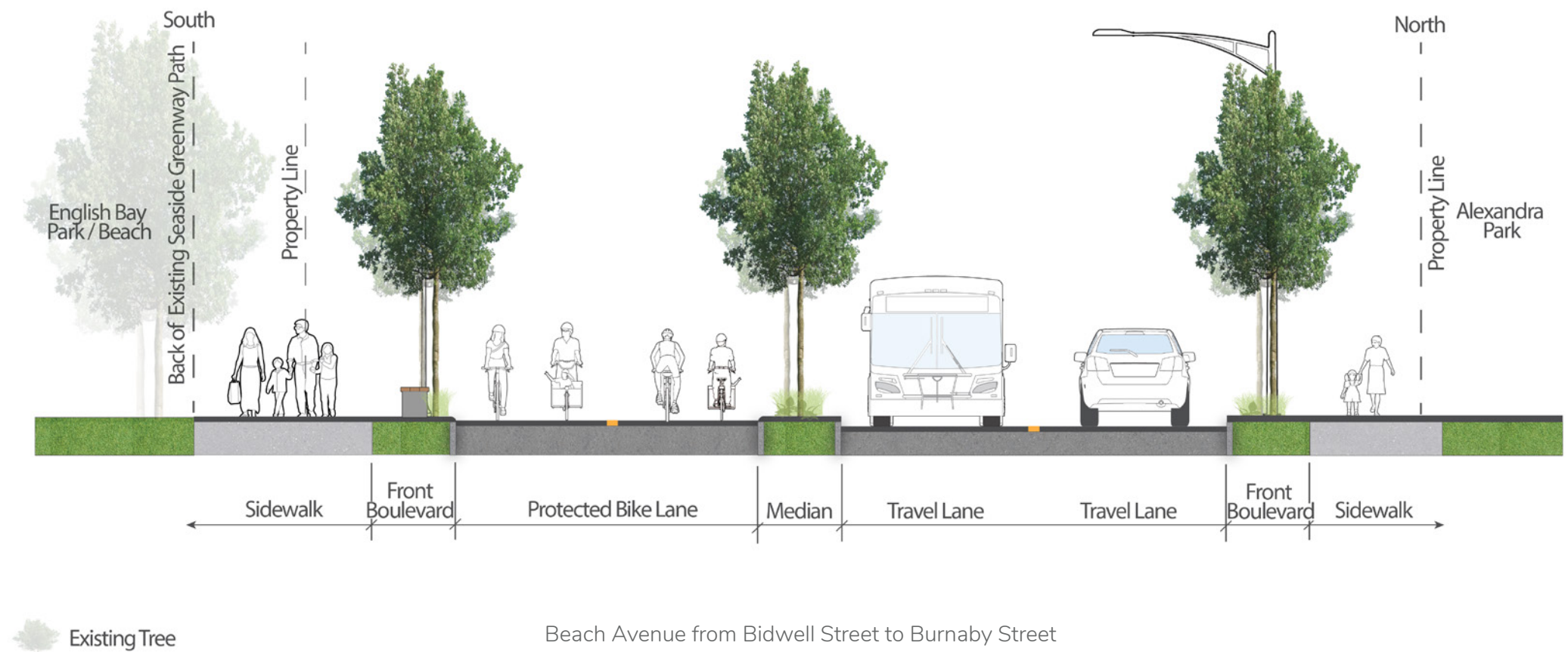
Existing or planned neighbourhood greenways will connect Beach Avenue and Pacific Street into the West End via Chilco, Cardero, and Bute Streets. The plan also proposes completing the neighbourhood greenway network in the West End and filling the gap along Burnaby Street between Cardero Street and Beach Avenue. The City has plans to enhance the Bute Street greenway and a signalized and protected intersection is proposed at Pacific Street to improve user comfort and safety.

### Park Cycling Network (Seaside Greenway)

Recognizing that many people value the experience of cycling through the park and near the water, the plan includes a section of the Seaside Greenway that runs through the park connecting the Seawall underneath the Burrard Bridge and meandering across a relatively shallow grade to connect to the Beach Avenue protected bikeway at the Bute Street intersection. This pathway connects cyclists to some of the key destinations in the park including the Vancouver Aquatic Centre, Sunset Beach, Roller Plaza, Sports courts, and Bute Plaza. The plan also proposes a potential elevated cycle path over the water in Area 5, maximizing connection to the water and creating a signature feature that provides a unique cycling experience along the waterfront.

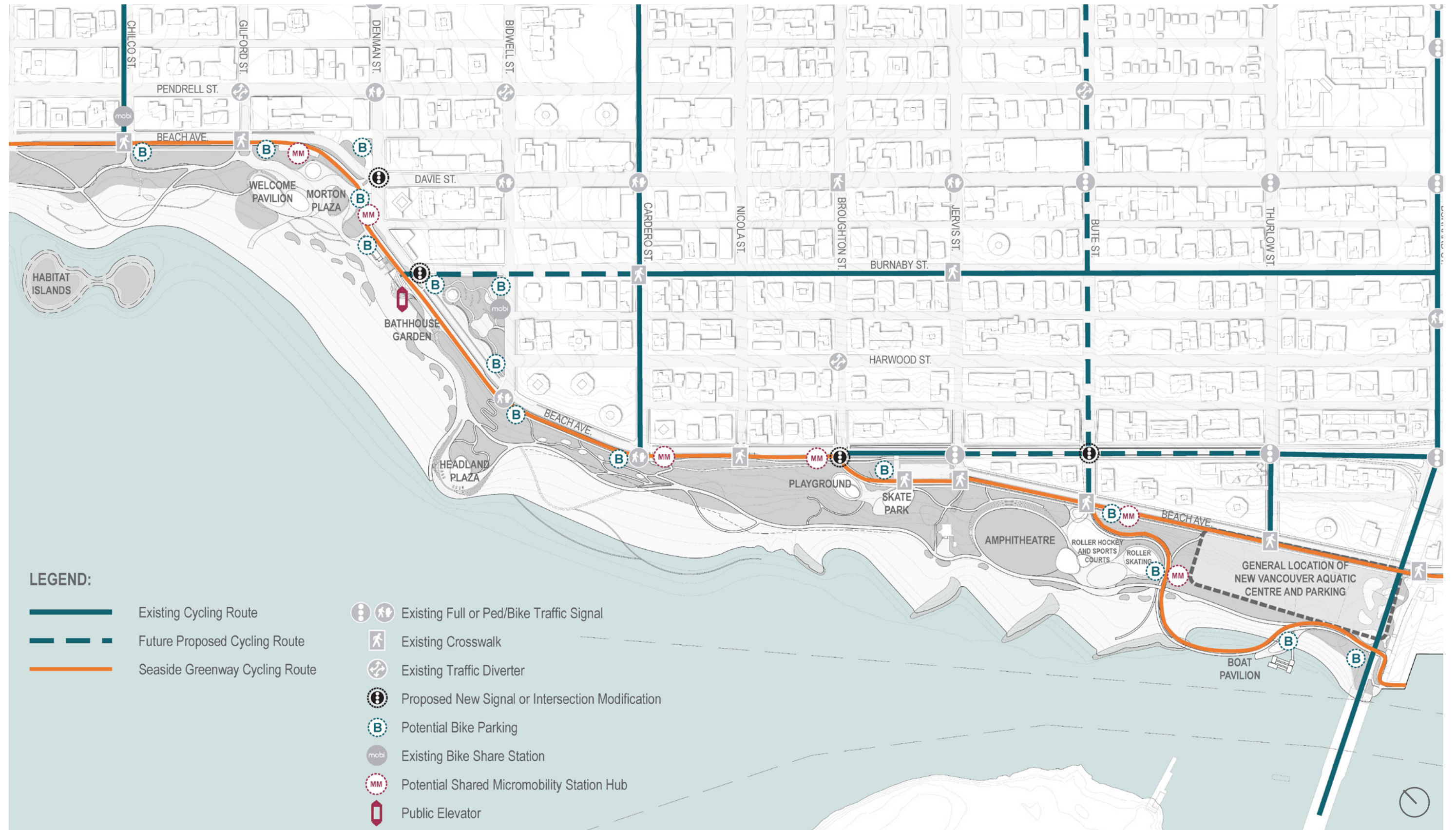
### Park Gateways

The cycling network includes several gateways where north-south bikeways intersect with the Beach Avenue protected bikeway. These are entry points into the park as well as multimodal access points. Gateways will primarily be along the neighbourhood greenway routes into the park and will include nearby space for shared micromobility stations and bike parking. Gateways will be designed to celebrate arrival, provide access to key destinations in the park, and encourage multimodal trip-making with end of trip facilities such as secure bike parking.





# CYCLING NETWORK MAP





## 4.2.3 Transit and Water Transportation

The study area will continue to be served by bus Route 23 along Beach Avenue. Routes 5 and 6 on Davie Street and Denman Street are also located nearby. In order to improve legibility and efficiency of the bus service and to support future planned upgrades from shuttle buses to a full-size bus, the plan proposes two-way service along Pacific Street, rerouting service from the Lower Beach area between Thurlow Street and Howe Street. On its western end, Route 23 will continue one-way on Bidwell Street and connect with the existing Route 5 and 6 service on Davie Street, before turning left again to travel eastbound on Beach Avenue. Bus stops waiting areas for transit users will provide safe, accessible, and comfortable areas, ideally with a bus shelter.

There is also potential to extend the service westward to Stanley Park via the section of Beach Avenue west of Denman Street. Improved access to Stanley Park is part of Vancouver's Transport 2050 goals, and a Stanley Park Mobility Study is also in progress which will inform future decisions about the transit network. Future studies of this area will assess the service span and frequencies of extensions or changes in routing and bus stops, in addition to service that terminates in the West End at the Davie-Denman intersection. Interim changes to transit service and bus stop locations may take place to support construction and the ongoing implementation of the plan.

Any proposed changes to the transit network will be in consultation with and confirmed by TransLink.

Water-based transportation is also expanded. The existing Aquatic Centre dock and its public access is maintained, and two potential launching points for non-motorized boats just west of the Burrard Street Bridge are introduced. A potential mobility hub near the dock to better connect the dock and integrate water transportation with other modes including cycling could be considered in coordination with the new Vancouver Aquatic Centre.

A canoe launch is proposed close to the ferry dock in the most protected part of the waterfront, where vehicles would be able to deliver racing canoes, should the local First Nations wish to establish a more formal canoe launch in this location. In this case, the elevated walkway would need to be sited high enough to ensure clearance at high tide, and the walkway could be designed, in consultation with the local First Nations, as a gateway feature that expresses Coast Salish arrival or welcome.

The potential of shifting the ferry dock and the non-motorized boat launch further west to the central portion of the study area has been studied, however, the tidal activities in this area prevent the siting of the ferry dock and the boat launch further west from the current location shown in the Plan.



[Left] Existing Route 23 shuttle bus service on Beach Avenue.



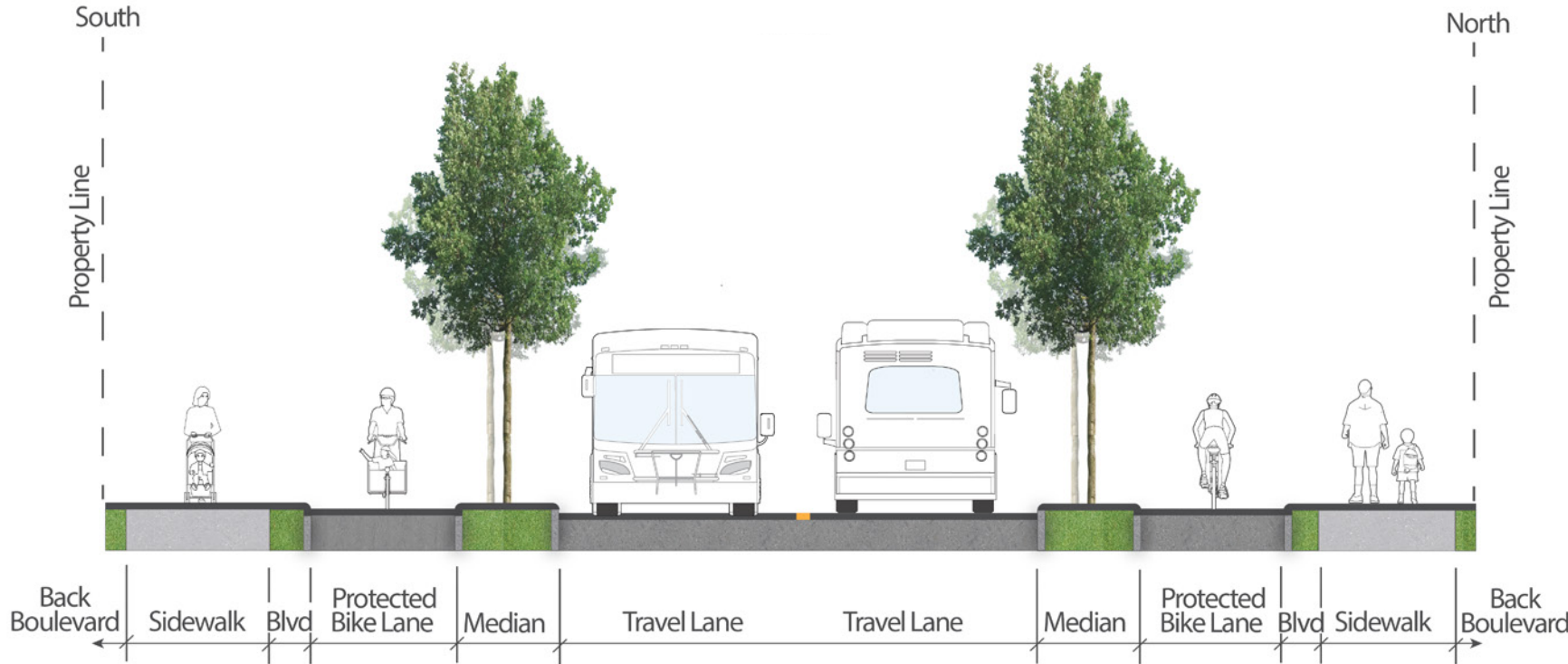
# TRANSIT AND WATER TRANSPORTATION NETWORK MAP





# 4.2.4 Vehicular Network

Two-way vehicular circulation will be reinstated for the section of Beach Avenue west of Denman Street. To simplify vehicle movements and improve connections to the park for people walking and cycling, the intersection at Denman and Davie Streets will be realigned to connect to Beach Ave to the west. Contingent on detailed design study, pedestrian scramble signal phasing could be proposed at the Denman-Davie intersection to allow pedestrians and bicycles to move in all directions during a dedicated signal phase. The Beach Avenue / Pacific Street corridor will generally be maintained with one travel lane in each direction. The section of Lower Beach Avenue east of Thurlow Street until Jarvis Street will continue to operate as one-way westbound vehicular traffic only.



Existing Tree Pacific Street from Bute Street to Jarvis Street



Existing Tree Lower Beach Avenue from Thurlow Street to Jarvis Street



# PROPOSED CHANGES TO VEHICULAR NETWORK MAP





## 4.2.5 Parking and Loading

The project's overarching approach to parking is to maintain at minimum the same number of accessible parking spaces compared to the current provision. Additionally, where practical, on-site parking is provided in areas (such as the triangular area near Jarvis Street) that otherwise would not be conducive for other park programming.

Street parking will be provided along lower Beach Avenue in a continuation of existing conditions. The provision of additional street parking and other curbside uses such as transit stops and loading and pickup / drop off areas to support local businesses, the Vancouver Aquatic Centre, and other programming will be explored and implemented where possible. Based on the observed availability of other off-street transient parking lots located within a convenient walking distance to the study area, there are currently plenty of additional parking opportunities available for park patrons to park their vehicles nearby.

Finally, the Aquatic Centre would continue to provide on-site public pay parking to accommodate its own programming needs as well as also be available to park visitors arriving by vehicle.



# VEHICULAR PARKING AND LOADING MAP





## 4.3 Park and Public Life

**The West End waterfront has been a place of joy and connection for millennia. Today the waterfront is one of Vancouver’s most beloved and highly used parks, and densification will only continue to increase demand for park space while sea level rise results in coastal squeeze. While the nature-based adaptation strategies proposed in the Vision Plan increase and widen some areas of the park, more creative strategies to the provision of public space are necessary to create more diverse, experiential, and flexible park spaces.**

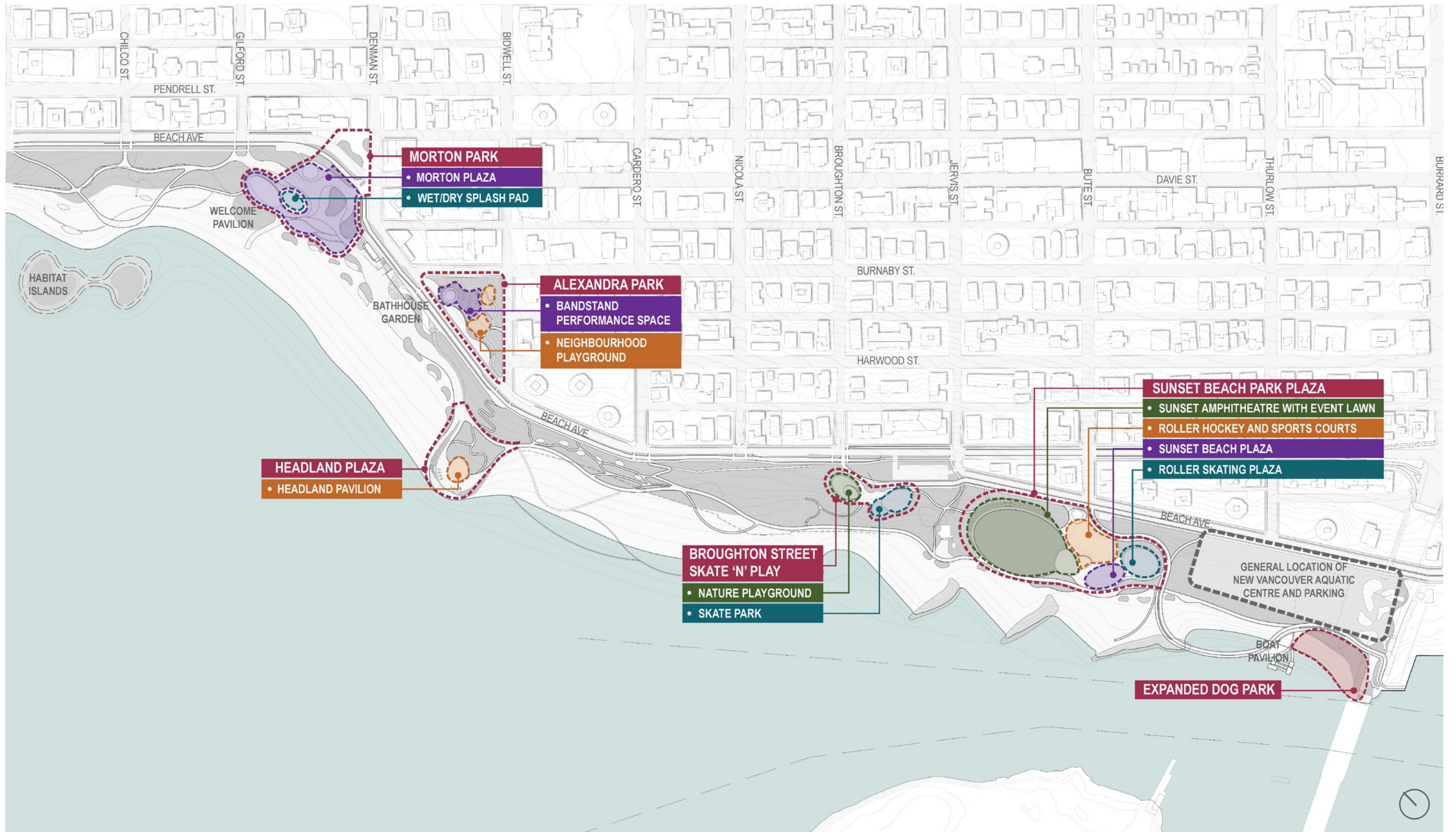
Increased demand also needs to be managed with the imperative to maintain the soft, emergent, atmospheric qualities of the waterfront. To reinforce these qualities, and to meet other objectives such as climate and ecological resilience, ecological restoration is considered to be of very high importance along the waterfront.

In order to meet demand while also creating more dedicated space for ecological function, programmed people places are clustered in key areas across the site at Morton Park and English Bay, the English Bay Headland, at the foot of Broughton and Bute Streets, and by the new Aquatic Centre. This strategy of alternating areas of quiet, ecological intensity with more programmed active zones for gathering and interaction requires particular strategies for:

- Landscape Character
- Programming
- Signage and Wayfinding



# PROGRAMMED AREA MAP



**MORTON PARK**  
 • MORTON PLAZA  
 • WET/DRY SPLASH PAD

**ALEXANDRA PARK**  
 • BANDSTAND PERFORMANCE SPACE  
 • NEIGHBOURHOOD PLAYGROUND

**HEADLAND PLAZA**  
 • HEADLAND PAVILION

**BROUGHTON STREET SKATE 'N' PLAY**  
 • NATURE PLAYGROUND  
 • SKATE PARK

**SUNSET BEACH PARK PLAZA**  
 • SUNSET AMPHITHEATRE WITH EVENT LAWN  
 • ROLLER HOCKEY AND SPORTS COURTS  
 • SUNSET BEACH PLAZA  
 • ROLLER SKATING PLAZA

**EXPANDED DOG PARK**



## 4.3.1 Landscape Character

The overall character of the site varies between the ecological, soft and intimate, to the more extroverted, hard and architectural. These areas overlap or frame one another in areas, and smaller intimate areas for gathering are nestled in to the wooded groves, meadows, shrubland, and intertidal zones.

### Hardscape

Areas of intensive gathering and usage are paved with robust materials to protect soils from compaction and erosion, and to create smooth surfaces for performances, dancing, sports, and other events. In addition to robustness, paving can be selected and treated for cultural / artistic expression, through materiality, patterns, and colour. These areas can be joyful, community-oriented expressions that, through consultation with the local First Nations, can express Coast Salish culture.

### Softscape

Softscape zones refer to areas designed primarily for habitat and biodiversity, with spaces to linger and learn. These areas promote a relational attitude of tending, where foraging and cultivation join with areas for intergenerational teaching, introspection, and small group gathering. The overall site is visualized as a matrix of native woodland groves and intertidal ecology, out of which other ecosystems such as meadow, riparian corridors, gardens, and shrubland are carved.

Detailed design of each area will include a number of these ecological spaces that might be more vulnerable to human use and interaction. These areas are reinforced or protected with elevated walkways, low fences, or signage.



[Left] Examples of landscape character variations that exist on the site today.



# SURFACE CHARACTER AND MATERIALITY MAP





## 4.3.2 Programming

### Everyday Site Uses

The Vision Plan creates a flexible and experientially diverse system of parks and places of movement offering a range of activities from passive, everyday uses to larger gatherings and formal events. Enhanced ecological zones provide immersive experiences in nature and increased canopy coverage provides shade and areas of summer respite. Lawns and meadows create an ideal setting for family picnics, lounging, sunbathing, or pick-up games.

Hardscape plazas, on the other hand, create an opportunity for small gatherings, casual seating, and enjoying urban life and everyday street activities.

All primary park pathways are augmented with seating along their length and smaller gathering areas create more intimate places from which to observe the life within the park and beaches. These pathways are also designed to accommodate vehicular movement allowing food carts and food trucks to be brought to the waterfront area, particularly near the beaches and Festival Lawn.

### Programmed and Special Events

The inherent flexibility planned for the larger areas of the park, both paved and green in form of lawns or meadows, allows for planning, supporting, and hosting events of various scales. These could vary from more intimate and simple community events such as farmers markets or community theatre to larger city-wide or regional events such as Celebration of Light and the Pride Parade and Festival. These spaces are also equipped with the necessary infrastructure, including electricity, water, event lighting, and a limited number of washrooms, to facilitate event support and planning.

All these program areas are accessible with vehicles (refer to Section 4.7.3 Operations and Maintenance) to facilitate event logistics and set-up. The Plan also allows for space at key program areas to augment the event logistics with elements such as portable washrooms, food carts and food trucks, and merchandise vendors.

The primary proposed event spaces collectively create generous areas to host city-wide and regional events, providing a variety of spatial configurations, access points, viewing opportunities, and event capacity. These areas are:

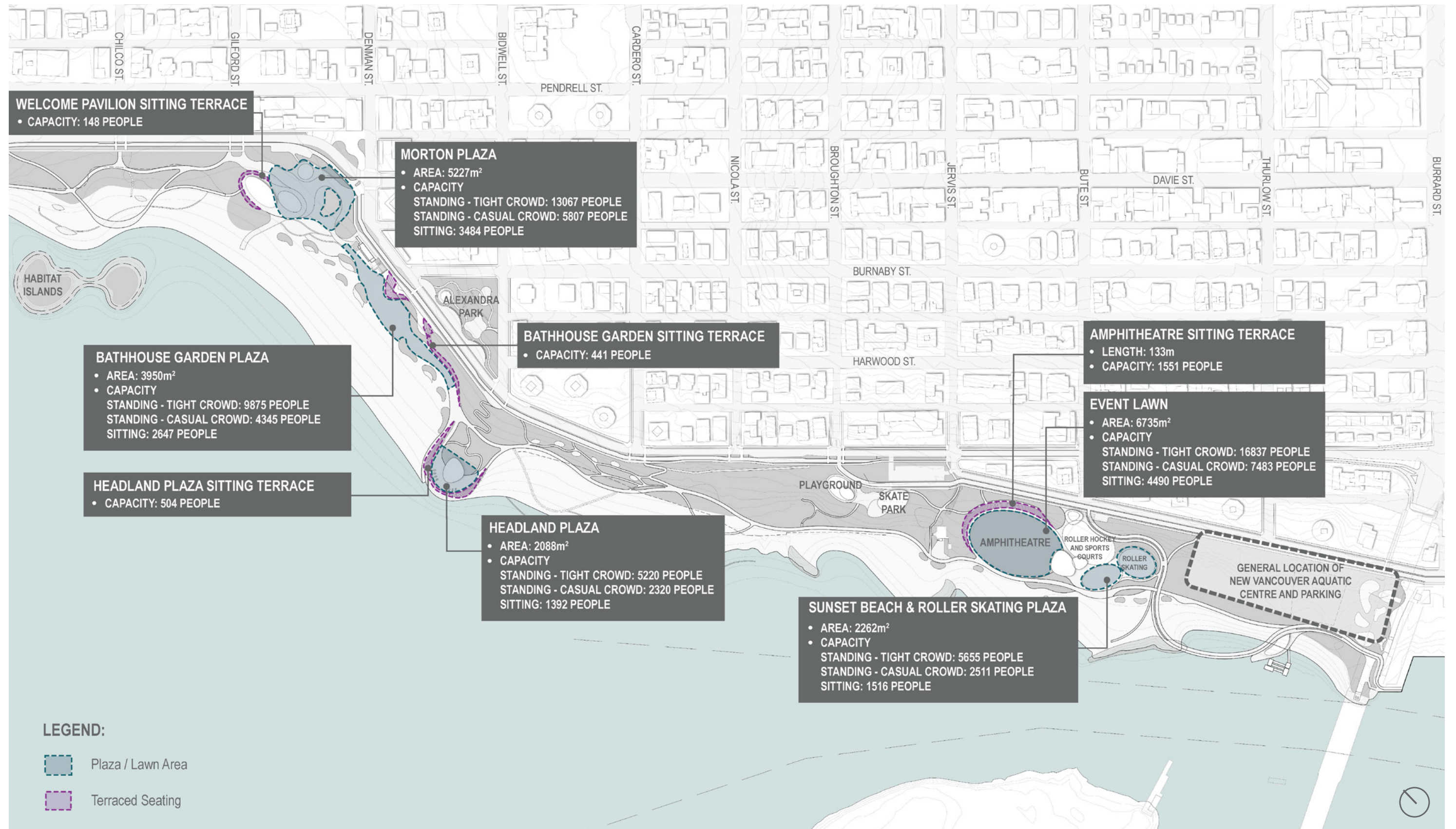
- **Morton Plaza**  
As the primary gateway to the waterfront area, Morton Plaza can accommodate urban celebration and events on its own or provide additional space for larger city-wide and regional events. The space boasts a highly visible open space connected to West End urban contents via the Davie-Denman intersection.
- **Upper Bathhouse and English Bay Amphitheatre Seating**  
Providing expansive and unimpeded views towards the water, this area is enhanced by amphitheatre seating along the grassy slope adjacent to the bathhouse, and continues to function as the primary area for the Celebration of Light grandstand and hosting spaces. On an everyday basis, the small plaza and the amphitheatre at the top of the bathhouse provide an excellent viewing and seating space for residents and tourists alike.
- **Lower Bathhouse Plaza**  
The expanded plaza space in front of the refurbished bathhouse can accommodate small, intimate events such as cultural workshops and displays (in consultation with the local First Nations). It can also accommodate economic opportunities such as craft markets as well as community events like children's programs, community art exhibits, and community consultation pop-up events.
- **Headland Plaza**  
The raised and expanded headland allows for the creation of a plaza space with unparalleled views towards the water and both English Bay and Sunset Beaches. With a potential canopy space turning this plaza into an all-season event space, the Headland Plaza will be able to host events and programs independently and provide additional auxiliary spaces to large regional events such as the Celebration of Light.

- **Festival Lawn and Amphitheatre / Sunset Beach and Roller Plaza**  
This area is the largest event space and is comprised of a series of interconnected plazas, buildings, courts, and open spaces. This area is capable of hosting very large events and is particularly suited to performances, concerts, and large festivals. A Bandshell Pavilion at the Sunset Beach level can act as a double-sided space to set up a performance stage or provide a weather protected space for events. The large Festival Lawn is envisioned as a reinforced lawn space that can withstand heavier pedestrian traffic and use. The lawn is enhanced with formal amphitheatre seating surrounding it, facing the water. The amphitheatre seating provides an efficient spectator seating space, taking advantage of what is today a steeply sloped lawn area. Sunset Beach and Roller Plaza can accommodate events independently or function as the back of house and support space for the large performances hosted at the Festival Lawn.
- **Haywood Bandstand**  
The relocated Haywood Bandstand and the open lawn area adjacent to it provides an intimate space that can be used for small community performances as was intended for this structure to support. Its closer proximity to Beach Avenue creates a stronger relationship between this performance structure and the West End waterfront context.
- **Under the Burrard Bridge Plaza**  
Due to its proximity to residential units, the area under Burrard Bridge is suited for quieter and more community-oriented programs such as farmers markets, children's programs, garden and flower shows, and community art exhibits.

As well as the above, the waterfront will continue to accommodate occasional programs such as filming, seasonal street activation events, races, and parades.



# EVENT AREA MAP AND POTENTIAL CAPACITIES





### 4.3.3 Signage and Wayfinding

Wayfinding is an important element of the circulation network to direct people to and from the area along comfortable and convenient routes. The Vision Plan envisions a cohesive approach to signage and wayfinding to support the overall objectives of the design and its seamless integration within the West End urban context. As a relatively linear space, it is important that visitors to the area are able to navigate along the waterfront and find their intended destination while enjoying the space along the way. To achieve this objective without creating unnecessary distraction or clutter, permanent wayfinding and signage elements should focus on the identification of various destinations and program spaces, primary entries, and main circulation routes, and should be placed at key decision making points to ensure integration with the greater West End neighbourhood.

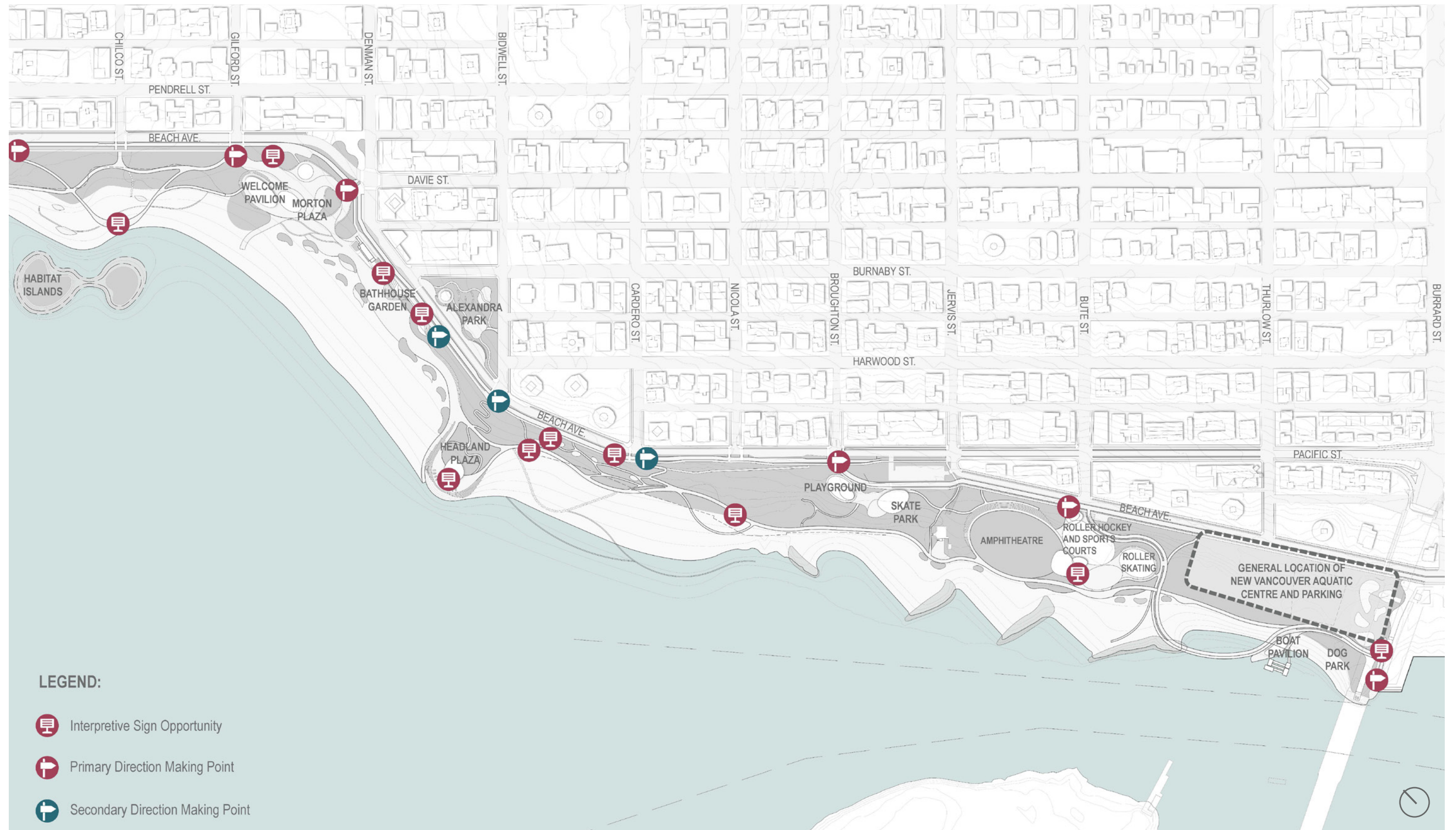
Denman Street, Davie Street, Bidwell Street, Bute Street, Thurlow Street, Jervis Street, and Chilco Street are key pedestrian gateways to the project area. Wayfinding should be enhanced outside of the study area to clarify these routes and how they are accessed, especially to bike routes and the Burrard Bridge. Signage that indicates the designated bike routes within and outside of the project area should also be improved to reduce confusion and conflicts between cyclists and pedestrians. In addition to wayfinding, signage is intended to provide an opportunity to inform and educate the general public about the local First Nations (in consultation with and at their comfort and lead), restored ecologies, sea level rise mitigation techniques, and the evolution of the area as envisioned in this plan.

Signage is also not expected to be the only means of wayfinding in the Vision Plan. It is intended that the width and materiality of the pathways, view corridors, and the use of softer design elements such as plants, lighting, and colour will be used to enhance, augment and at times be the primary means of wayfinding.

Opportunities for the local First Nations to tell the stories erased or suppressed by colonization should be provided through consultation and at their comfort and lead.



## SIGNAGE AND WAYFINDING MAP





## 4.4 Facilities

**Buildings and facilities have been placed strategically throughout the park to activate and support its use. Design principles, in conversation with programmatic needs, and budgetary goals will guide development and formal realization. These buildings aim to become exemplars of community centres, sustainable design, and cultural relevance.**









# 4.4.1 Facilities and Amenities Map



## FACILITIES AND STRUCTURES

- 1 Welcome Pavilion
- 2 Bathhouse Garden
- 3 Haywood Bandstand
- 4 Headland Pavilion
- 5 Broughton Skate n' Play
- 6 Jervis Pump Station
- 7 Bute Bandshell and Sports Courts
- 8 Boat Pavilion and Landing
- 9 Vancouver Aquatic Centre

## PUBLIC AMENITIES

-  First Aid
-  Public, Single-User, Universal Washrooms / Change Rooms
-  Accessible Access
-  Food and Beverage
-  Seasonal or Concessions
-  Picnic Area



## 4.4.2 Morton Plaza Welcome Pavilion

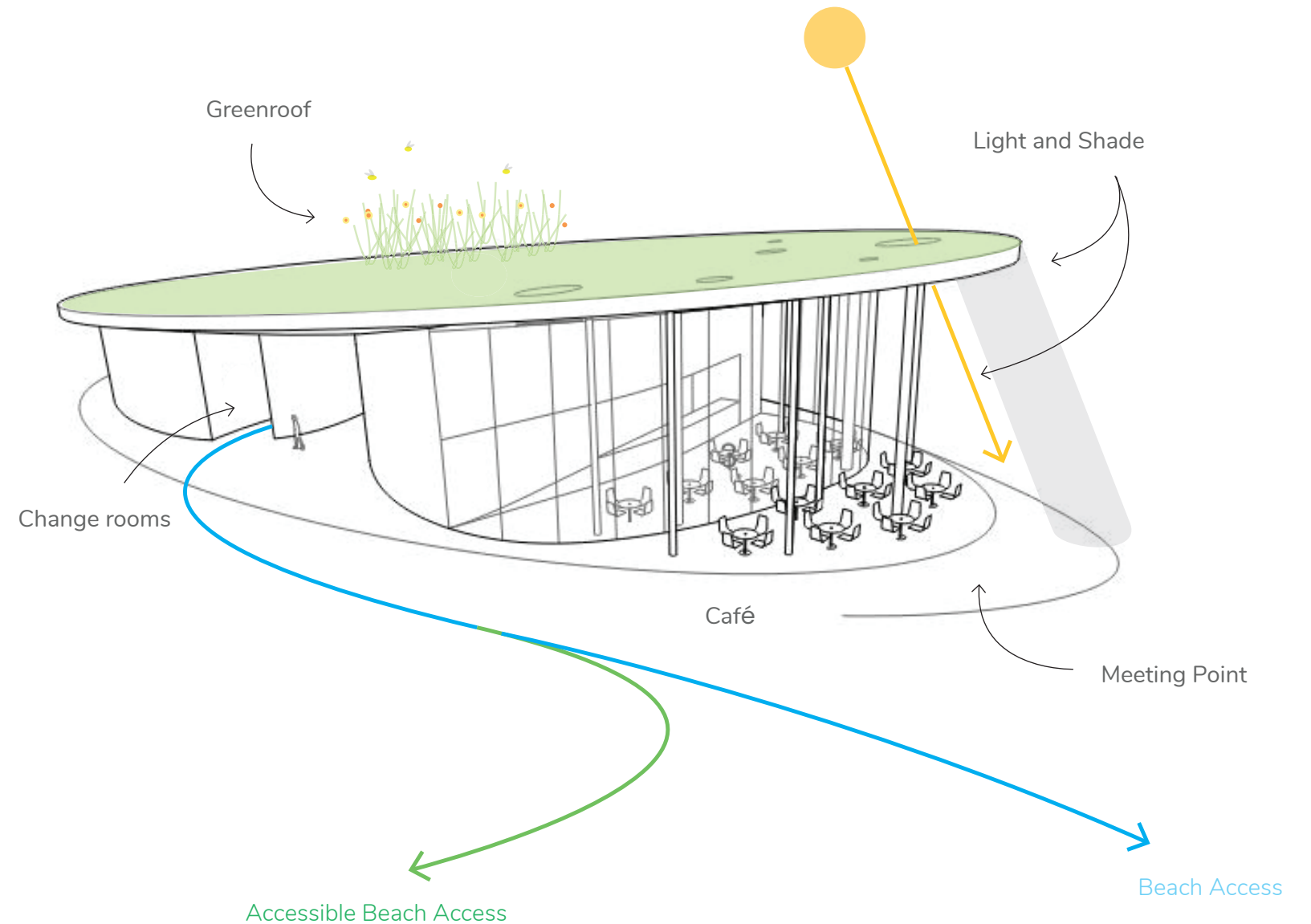
### Welcome.

The Morton Plaza Welcome Pavilion is sited at a key intersection of city and sea. Located within a generous public plaza, and backed by a grove of trees, it will nestle into the space and warmly embrace visitors. The pavilion is defined by a canopy that extends over the two separate interior spaces below, which host pragmatic and amenity programming. The intermediary covered space will act as a weather-protected meeting point between the two entries.

The pavilion will house public universal washrooms, change rooms with showers, and additional lifeguard storage space (all previously located at the English Bay Bathhouse), as well as a new café. The café portion of the pavilion will feature tall glazing with views back to the West End and expansive views out over English Bay Beach to the Salish Sea. Outdoor seating will allow seasonal expansion opportunities for the café and serve as public soft seating all year along.

The washrooms will be operable year-round, though the change rooms would likely be operated seasonally. Accessibility is of paramount importance throughout the park, and the pavilion will be entirely accessible on one level. Additionally, there will be an accessible path leading from the pavilion over the beach and to the water, allowing all visitors to enjoy a swim.

The building will be viewed from all sides, and needs to be a good neighbour to adjacent residents and businesses. Creating permeability, maintaining sightlines, and creating tactile, beautiful facade treatments on all of its sides will ensure the Welcome Pavilion is a gem for residents and visitors alike.



\*Concept image - detailed architectural designs will be developed during future implementation phases.





artistic illustration of WELCOME PAVILION [21]



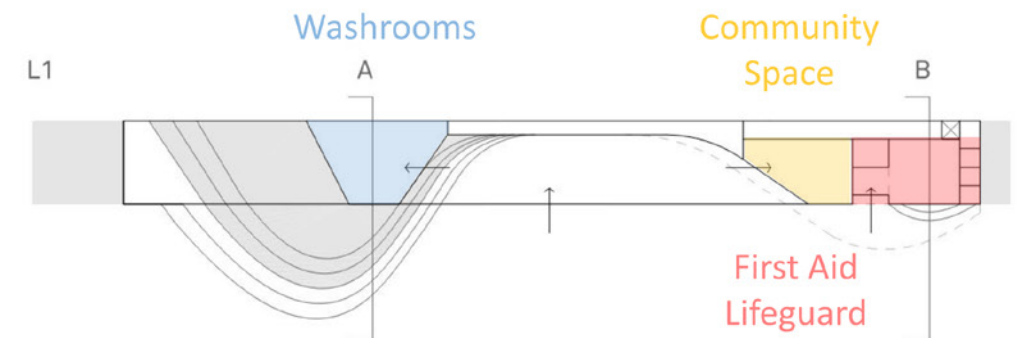
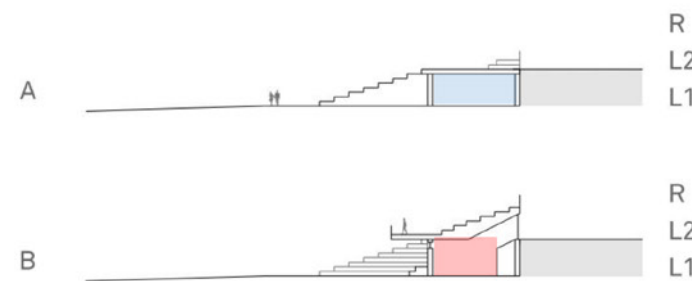
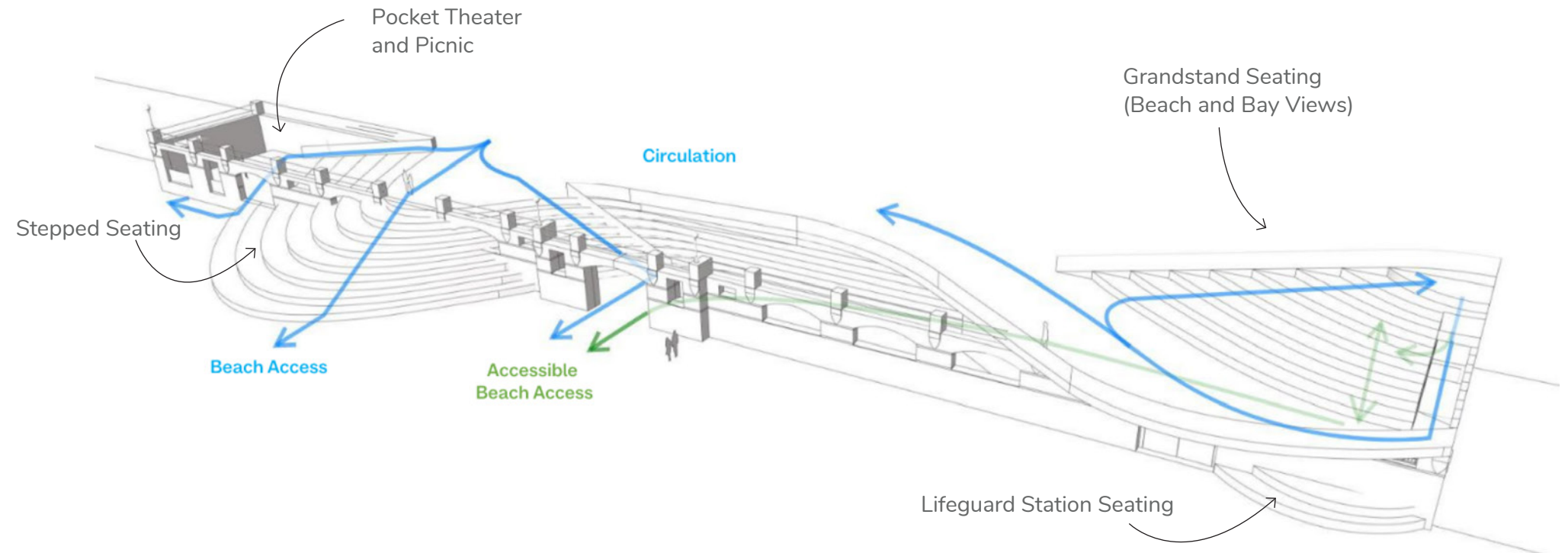
## 4.4.3 Bathhouse Garden

### Reimagine.

The existing English Bay Bathhouse is the surviving structure of a lineage of bathhouses starting in the late 19th century to encourage and support watersports and recreation. It was built in the early 1930s using board-formed concrete, offering washrooms and change rooms. Additionally, it stored lifeguard equipment in the off-season for all public beaches, acted as the central location for all beach guards, and had a first aid station.

Over time, the structure has suffered from poor waterproofing leading to rusting steel reinforcement, spalling concrete, and increasing damage from previously rare storm events resulting from climate change and sea level rise. The building is listed as “Significant” by the Vancouver Heritage Foundation (VHF) (Schedule ‘B’ designation), and the proposed design intent has preliminarily been discussed with the VHF. This conversation should continue through design development and implementation.

Programmatically, the building will continue to support a lifeguard first aid station and storage and provide washrooms (though change rooms will be relocated to the Morton Park Welcome Pavilion). The roof and cascading boardwalk deck will continue to support public seating and annual events such as the Celebration of Light and the Polar Bear Swim. The new program will include a community space and accessible entry from Beach Avenue to the beach by way of an interior elevator. This will mend the disconnect at a vital entryway from the West End and Alexandra Park to the water, underlining the urban connections that architectural interventions can support within the park layout. Courtyard gardens will enliven the liberated exterior spaces on the interior of the original facade, reimagining this much beloved building and redefining its relevance. At the lead of and in consultation with the local First Nations, an Indigenous garden will be explored for the courtyard to help recontextualize the colonial origin of the bathhouse in the spirit of Reconciliation and decolonization. Continued consultation with lifeguard staff throughout the design process is also highly recommended.



\*Concept image - detailed architectural designs will be developed during future implementation phases.





artistic illustration of BATHHOUSE GARDEN [22]

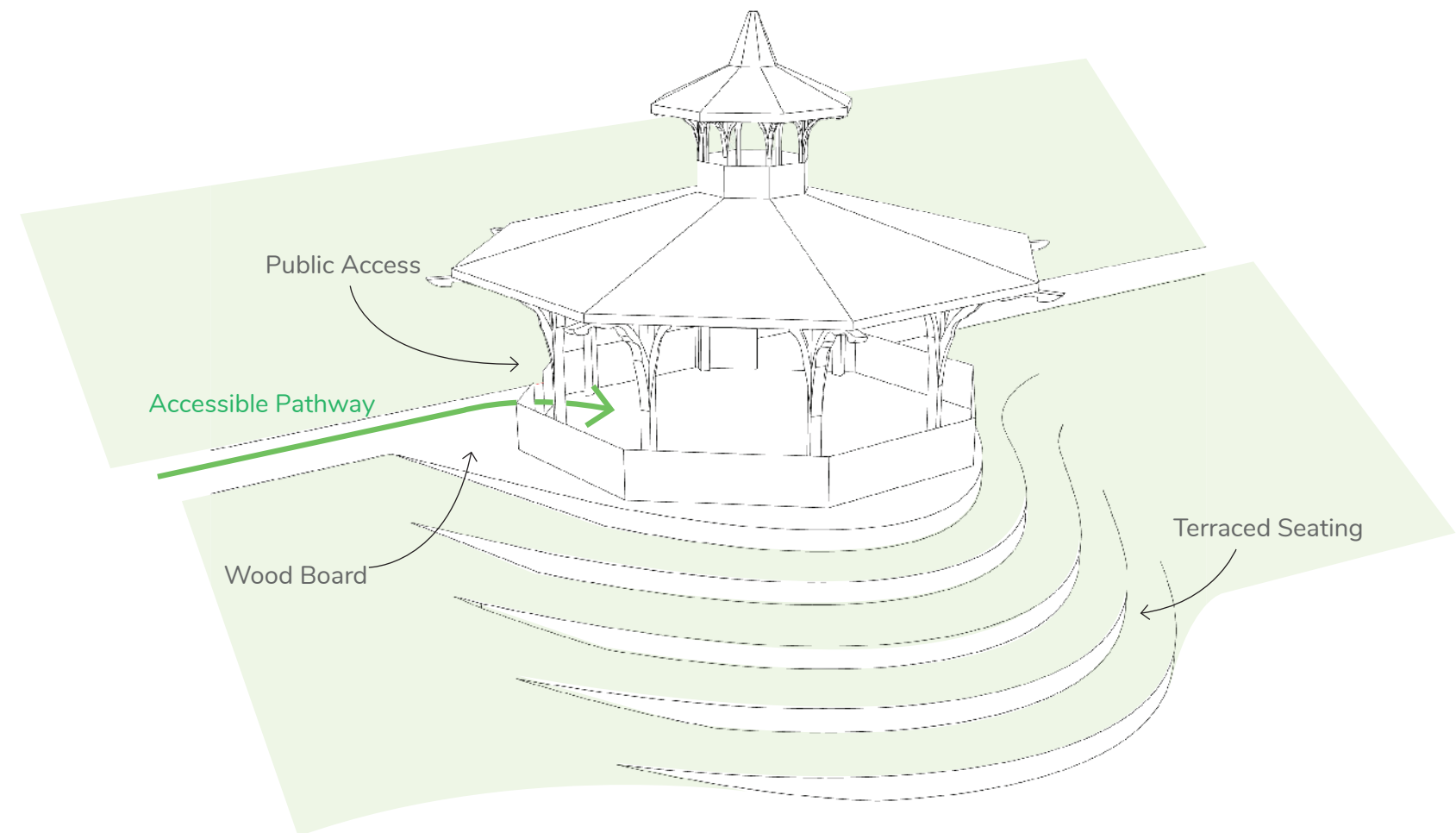


## 4.4.4 Haywood Bandstand

### Show time.

The Haywood Bandstand was originally built in 1914 and then later restored in 1988. It is the only surviving bandstand of a set of seven that were distributed throughout Vancouver. It has been listed as “Primary Significance” by the Vancouver Heritage Foundation (VHF) (Schedule ‘A’ designation).

Its use as a bandstand or other center of community entertainment has been minimal in recent years and public access to it has been mostly restricted. Due to the fact that this is not its original location, initial conversations with VHF have supported relocating it to a more accessible and prominent location within Alexandra Park. Sited closer to Beach Avenue, it can be tucked into the existing grade to make it more visually and physically accessible, with detachable wood steps that connect to Beach Avenue that can be used for seating for views of the ocean and beyond. This shift enables a larger gathering space to the north for audiences to enjoy onstage performances. Opening up the surrounding fencing will allow the structure to regain its relevance in the community as a space that accommodates everyday weather protected gatherings and special events.







artistic illustration of HAYWOOD BANDSTAND [23]



## 4.4.5 Broughton Street Skate'n'Play

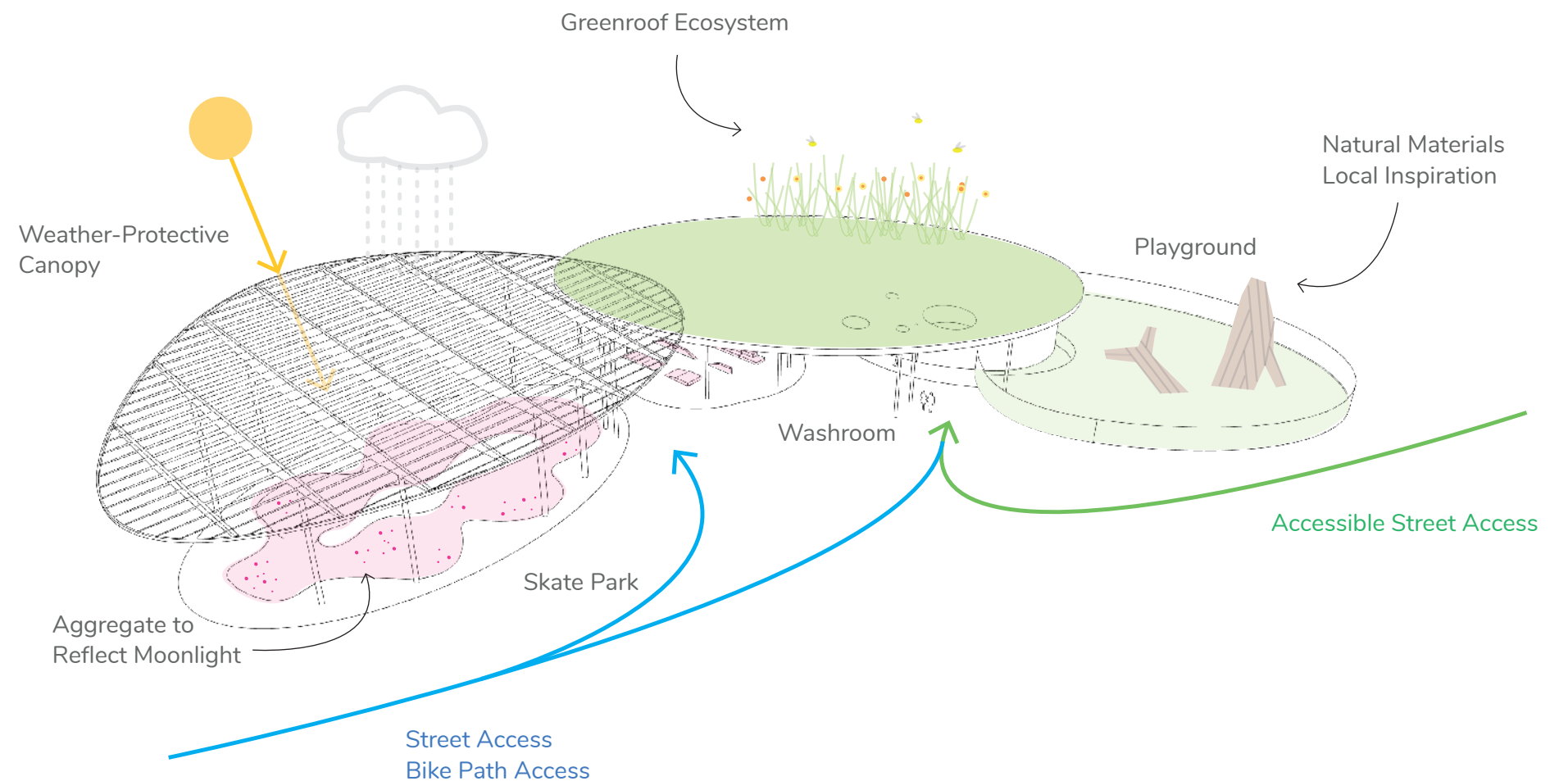
### Play.

Perched at the intersection of Beach Avenue and Broughton Street, the skate park and playground are conveniently located to serve the West End community and greater Vancouver. Children and youth are centered within the park, and given space of prominence in the overall plan.

Skate parks have traditionally sprouted in underutilized urban spaces, but those that have been given a place of prominence tend to rise to a higher standard. The prime waterfront location will add a unique backdrop and experience for those skating as well as spectating. It will provide a community space for skaters of all ages, and provide respite and opportunity for safe after school fun.

The playground will be geared towards younger children with a focus on refined natural playscapes. Focusing on the use of natural elements and materials as opposed to plastics and bright colours will underline the project goal of being genuine and authentic to place.

Public universal washrooms will also be provided between the skate park and the playground providing an essential accessible public service. An extended canopy will shade and protect the entrance, and punched openings will allow sunlight to cast spotlights on fair weather days.



\*Concept image - detailed architectural designs will be developed during future implementation phases.





artistic illustration of BROUGHTON STREET SKATE'N'PLAY [24]



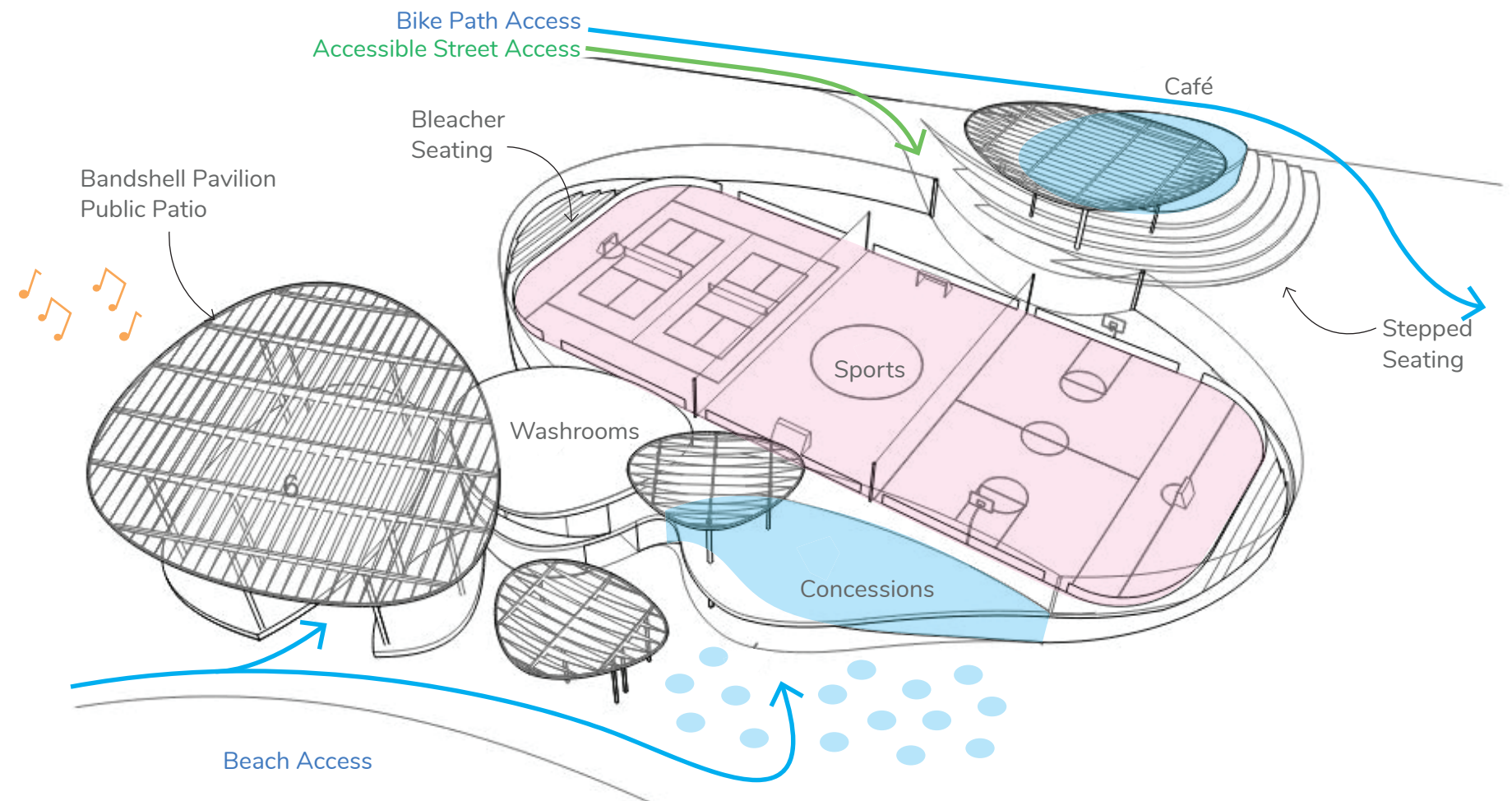
## 4.4.6 Bute Bandshell and Sports Courts

### Come together.

The Bute Bandshell and sports courts will create a focal point for cultural events and sports within the park at the base of a natural amphitheatre. An intentional compression of amenities will maximize the existing utility connections and minimize the footprint of these elements within the overall park.

Canopies will stitch together adjacent programming separated by exterior circulation. The largest canopy will protect a public plaza space capable of hosting large-scale concerts with attendees sitting on the great lawn and surrounding amphitheatre steps. Temporary stages and equipment will utilize integrated infrastructure connections and space is allocated below the sports courts for trucks, buses, and any other event support. Additionally, there is opportunity to create spaces for services including a lifeguard station through consultation with lifeguard staff.

Below the sports courts will be a seasonal concession that serves a large outdoor seating and picnic area peppered with shared tables and outdoor cooking locations. This building will include public universal washrooms and accessible circulation between the beach level and sports courts. Tiered wooden bleacher seating at each end of the courts along with loose seating on the south will allow great views of the game, and the Salish Sea. A café at the Beach Avenue level will serve passersby from the West End, cyclists riding along the protected bike lane, and players and park users alike.



\*Concept image - detailed architectural designs will be developed during future implementation phases.





artistic illustration of BUTE BANDSHELL AND SPORTS COURTS [25]

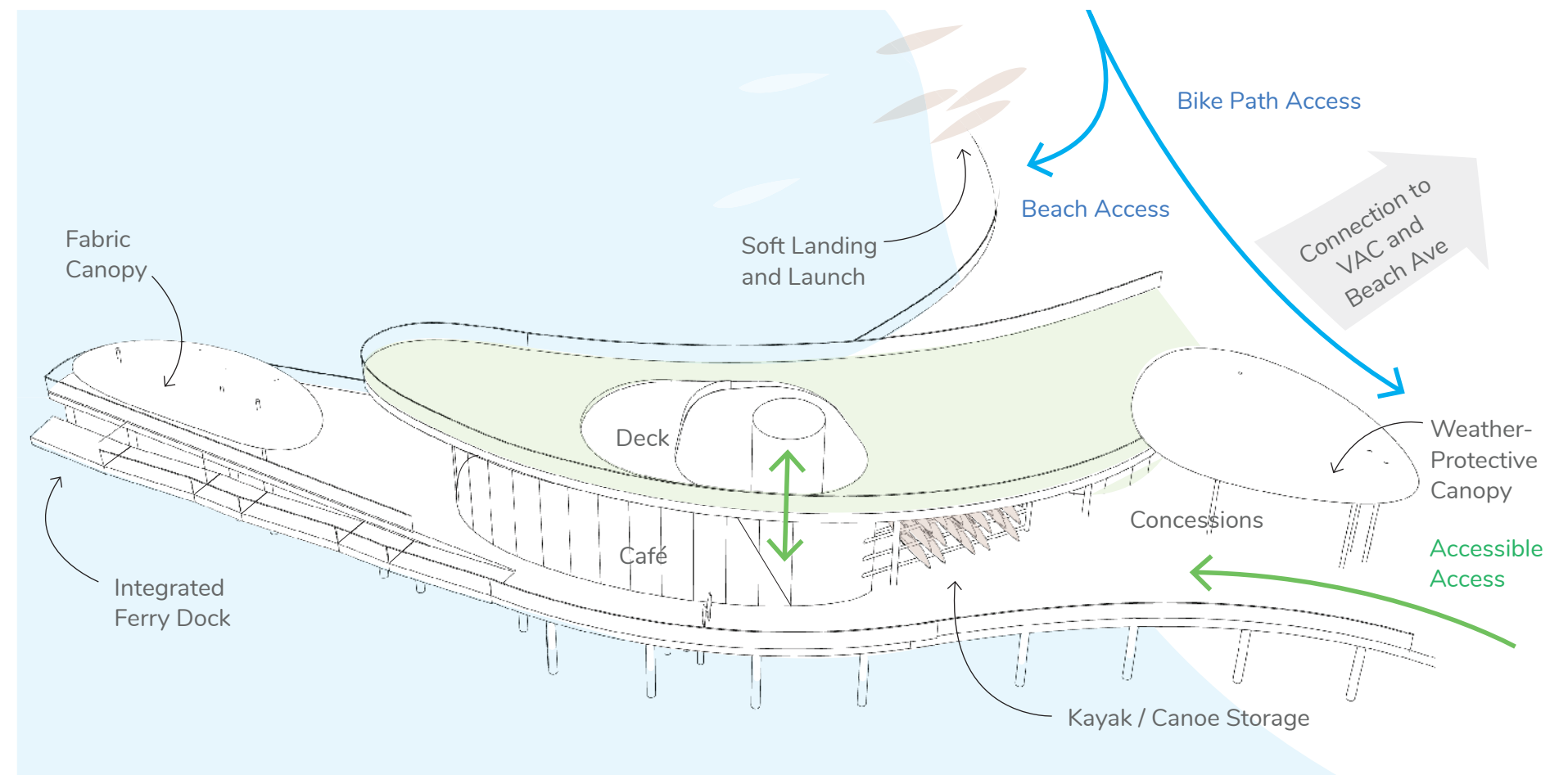


## 4.4.7 Burrard Boat Pavilion

### Bayfront.

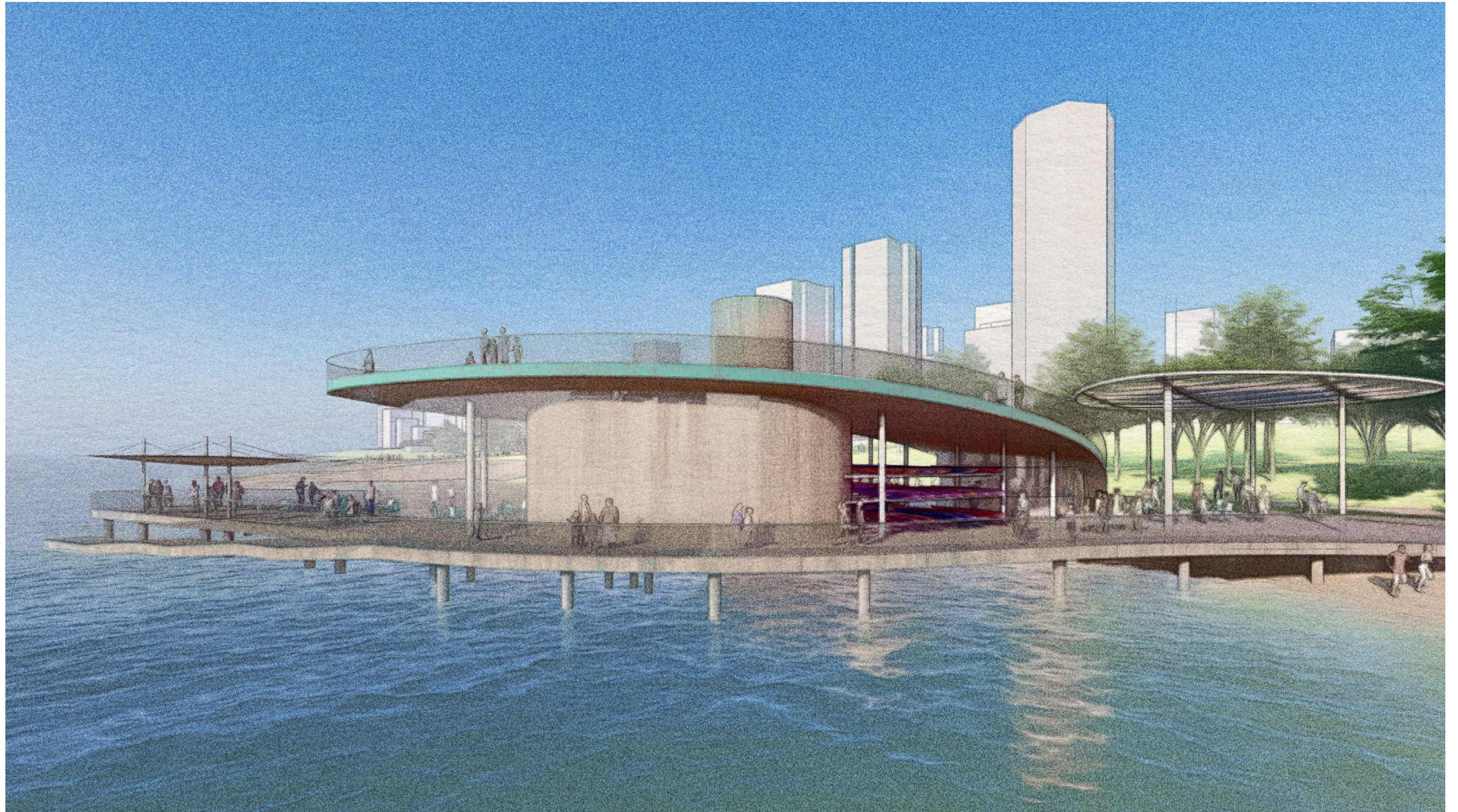
The Burrard Boat Pavilion will welcome visitors arriving from the water. In addition to the False Creek Ferry, it seeks to become a landing for other vessels as well. An upgraded and integrated floating dock system will extend down from a fixed pier which will support a café / concession and canoe and kayak storage, topped by an occupiable (and potentially green) roof. Integrated with the park's bike and pedestrian pathways, as well as the new Aquatic Centre, the boat pavilion will connect the water to the West End.

Visitors would be able to rent a canoe, stand-up paddleboard, or kayak, and launch it from the beach, and local residents could store their own unmotorized watercraft there. The boat pavilion will support events such as dragon boat races and canoe carving workshops in consultation with the local First Nations.



\*Concept image - detailed architectural designs will be developed during future implementation phases.





artistic illustration of BURRARD BOAT PAVILION [26]



## 4.5 Art and Culture

**Imagine West End Waterfront makes several recommendations for existing and future artworks. There is an overarching opportunity to ground the waterfront back to local First Nations cultural expression and to create a framework for art that is relevant to, and emergent from, this particular place.**

Artistic features and monuments throughout the West End waterfront have generally accumulated over many decades without following an overarching public art strategy or art vision for the site. The majority of the existing works arrived through donation by different groups or organizations rather than being commissioned specifically for the West End waterfront or designed to respond to the unique context and / or embedded stories of this important place.

A number of the existing works in the site were originally intentioned as temporary works as part of the Vancouver Biennale Exhibition, curated privately from artists internationally, with some works later donated or loaned to the site as part of a legacy foundation. Over time, a number of these donated works have become accepted fixtures loved by tourists and members of the public despite their lack of intended site specificity.

Some existing artworks in the project site present controversial messaging either through their associated plaques, or as related to their origin, which runs counter to the Park Board and City's current commitments to reconciliation, redress and equity, and the acknowledgment that these lands are the unceded, ancestral, and traditional territory of the x̱m̱əθḵ'əy̱əm (Musqueam), S̱ḵw̱x̱w̱ú7mesh Úxwumixw (Squamish), and sə̱lilwətaʔ (Tsleil-Waututh) Nations.

The project site is also used for several temporary public art and transient works, sometimes related specifically to this place and other times not. Some of these works are endorsed by the Park Board and City and others are created spontaneously by people without formal civic approval.

Recommendations for existing works include:

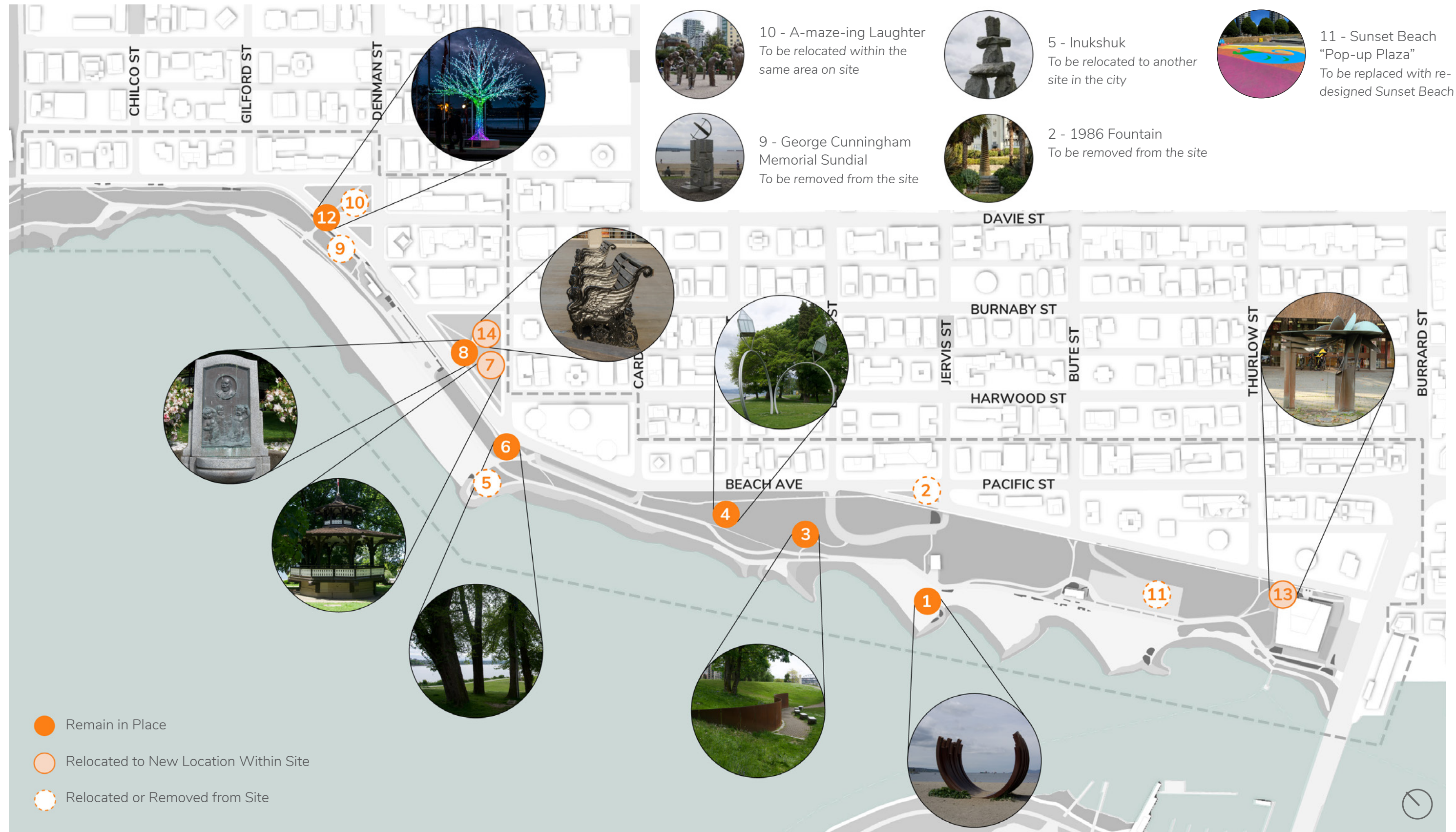
1. **Remove works that are inappropriate or that lack current relevance.**
  - George Cunningham's Memorial Sundial makes colonial references to the Three Greenhorns and disregards the local First Nations, and should be removed.
  - Alvin Kanak's Inukshuk, although loved, speaks to the issue of pan-indigeneity on this particular site. It should be relocated to a more relevant site within the city.
  - The 1985 stone fountain at the foot of Jervis is no longer relevant to the project site, and should be removed and either relocated to another site, or put in storage.
2. **Maintain works that continue to have relevance to the community, or that have grown to be loved by the community. This includes:**
  - The AIDS Memorial
  - Dennis Oppenheim's 'Engagement'
  - Bernar Venet's '217.5 ARC x 13'
  - George Wainborn's 'Lights for Life' should be maintained in this location, however the lighting should be improved.
3. **Move works for improved park functioning. This includes:**
  - Yue Minjun's A-Maze-ing Laughter should be shifted to the northwest area of the new plaza, within its own garden, so that it isn't located in the middle of the new plaza. As the primary gateway to the site, new or proposed works in Morton Plaza should be developed in collaboration with the local First Nations.
  - Charles Marega's Joe Fortes Fountain should be shifted to the street level plaza for increased visibility and interaction.
  - George A. Norris's 'The Swimmer' should be moved to a visible site in relation to the new Aquatic Centre.
  - The Esmond Lando Swan Benches on top of the bathhouse should be moved into Alexandra Park, integrated along the internal loop pathway.
  - All memorial benches should be shifted on site to a location along the raised primary pathway that is close to where they are currently located.

### Public Art and Monuments Currently On Site

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1 217.5 ARC x 13 *</li> <li>2 1986 Fountain</li> <li>3 Vancouver AIDS Memorial</li> <li>4 Engagement *</li> <li>5 Inukshuk</li> <li>6 Lights for Life</li> <li>7 Haywood Bandstand</li> <li>8 Joe Fortes Drinking Fountain</li> <li>9 George Cunningham Memorial Sundial</li> <li>10 A-maze-ing Laughter</li> <li>11 Sunset Beach "Pop-up Plaza"</li> <li>12 Lumière Festival</li> <li>13 The Swimmer</li> <li>14 Esmond Lando Plaza</li> <li>15 'Sea and Land Creatures' by Chrystal Sparrow</li> </ol> | <p>* On long-term loan from the Vancouver Biennale Exhibition, and subject to the terms of the loan agreement.</p> |
|---|--|



## EXISTING ARTWORK RECOMMENDATION MAP



- Remain in Place
- Relocated to New Location Within Site
- Relocated or Removed from Site

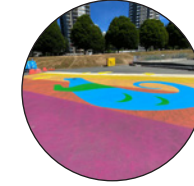
## ARTWORK PROPOSED FOR RELOCATION OR REMOVAL



10 - A-maze-ing Laughter  
To be relocated within the same area on site



5 - Inukshuk  
To be relocated to another site in the city



11 - Sunset Beach "Pop-up Plaza"  
To be replaced with re-designed Sunset Beach



9 - George Cunningham Memorial Sundial  
To be removed from the site



2 - 1986 Fountain  
To be removed from the site



Recommendations for future artworks include:

### 1. Center Local First Nation's Culture

Public art should be integrated throughout the West End waterfront to ensure a holistic connection to the site that uplifts x̣ṃəθḳẉəỵəm (Musqueam), Sḳẉx̣ẉú7mesh Úxwumixw (Squamish), and sə̣lilwətaʔ (Tseil-Waututh) Nations cultural vibrancy. New permanent public art should be developed in collaboration with the local First Nations.

### 2. Works that are Place-based and Land-based

Works that are created for this park should be specific to the rich context past and present of the West End waterfront. A place-based approach to public art is grounded in the heritage, cultures, landscapes, and experiences of this particular place. A land-based approach to public art addresses the relationship with the land, whether that be natural, spiritual, or relational.

### 3. Works that Define or Create and not just Occupy Space

Consider works that make space for activity, gathering, and celebrations rather than just placing objects or obstacles within the park. Consider a diversity of forms beyond monumental art.

### 4. Bring Artists and Other Creatives onto Design Teams

There is great opportunity to bring local First Nation creatives, racialized creatives, and other creatives onto the design team to influence the design of spaces and structures, allowing for the integration of artworks throughout the entire park. At the time of this plan, the Park Board does not have an active funding source for public art. Integrating creatives and artists onto design teams will allow for the capitalization of park construction budgets, mitigating the need to find art budget amounts to commission artworks separately.

### 5. Functional Artworks or Art Integrated into Existing Infrastructure

Similar to design team artworks, finding opportunities to enliven existing or future built structures with art will also capitalize on construction budgets.

### 6. Engage the Water

Currently none of the artworks actively engage the water or interact with it in any way. There is a great opportunity to connect to the Indigenous, ecological, hydrological, historical, and cultural relationships to water and this place.

### 7. Ephemeral Works

Lighting or sound-based works could reference many cultural and ecological elements of the site. Strategies and opportunities for illumination artworks will activate the public spaces at night and help people feel safer. Sound based works could be utilized to tie people to the stories and experiences along the waterfront past and present, including those stories that have been suppressed or denied historically for equity, diversity, and inclusion.

### 8. Platforms for Temporary Works

The West End waterfront has been used as a place to exhibit temporary artworks particularly through the Vancouver Biennale and other festivals. There is an opportunity to continue the energy and excitement these rotating works bring to the site but shift the focus to be on more site specific and culturally relevant works related to this place and local perspectives. To foster dialogue, opportunities for temporary public art should reflect place and / or land-based approaches and can, when appropriate, be made available to all, including Urban Indigenous artists and non-local Indigenous artists.

### 9. Artist Residency

A rotating artist residency could be developed within park buildings to bring cultural production back to the on-site activities on the waterfront, and also potentially provide opportunities for cultural education or mentorship for Indigenous artists.

The diagram on Page 129 suggests typologies for art opportunities within the West End waterfront area. These suggested opportunities form an initial framework to support future planning, design development, detailed design, and eventually construction of each area planned for the West End waterfront.

It is recommended that artists and other creatives be involved as early as possible in the design process as collaborators on the design team to influence design details and concepts and to yield meaningful works that are integrated throughout the entire experience of the park.

#### A. Functional / Integrated Art Opportunities

1. Artwork integrated into the elevated boardwalk / handrail or the water itself that responds to or tells the story of sea level rise and / or intertidal habitat in some way. This could also be a sound work.
2. Artwork integrated into fixed or movable design elements such as pavilions and canopies, seating, and / or site furnishings.
3. Artwork integrated into terraced seating at the water's shore or the water itself that relates to the story of the original shoreline / salt marsh in some way.
4. Artwork integrated into the skate park as a signature element.

#### B. Local First Nations Artworks Opportunities

*(It is suggested that these opportunities should be offered to the local First Nations to run their own processes for the selection of creatives or artists for these works and to site the final works. The Park Board, City, and design teams should be available to facilitate the process and / or realization of these works as requested or needed.)*

1. Local First Nations Welcome from the Land Artwork.
2. Local First Nations Welcome from the Sea Artwork.
3. Artwork that speaks to Indigenous / Medicinal Use of plants. Could be a series of works along the boardwalk.
4. Local First Nations work integrated into Canoe Landing.

#### C. 2D Artworks on or within Surfaces *(Any of these opportunities could also be designated as local First Nations artworks opportunities.)*

1. Artwork design integrated into plaza surface.
2. Mural integrated into the wall surfaces of existing and new structures (bathhouse, bridge structures, etc.).
3. Mural integrated into roadwork or crossings to help connect areas and entrances to the overall park.
4. Artwork integrated into concrete surfaces of the skate park, roller plaza, and sports courts with paint, dies, stamps etc.
5. Mural along the side of the steps and up the stairs to create a more interesting and legible route under the bridge.

#### D. Illumination Artworks

1. Lighting artwork or artistic lighting programming or sequencing integrated into structures (bandshell, canopies, plaza etc.). Could be interactive with human and / or environmental activity or systems.
2. Lighting and / or projection on bridge structures.

#### E. Temporary Artworks

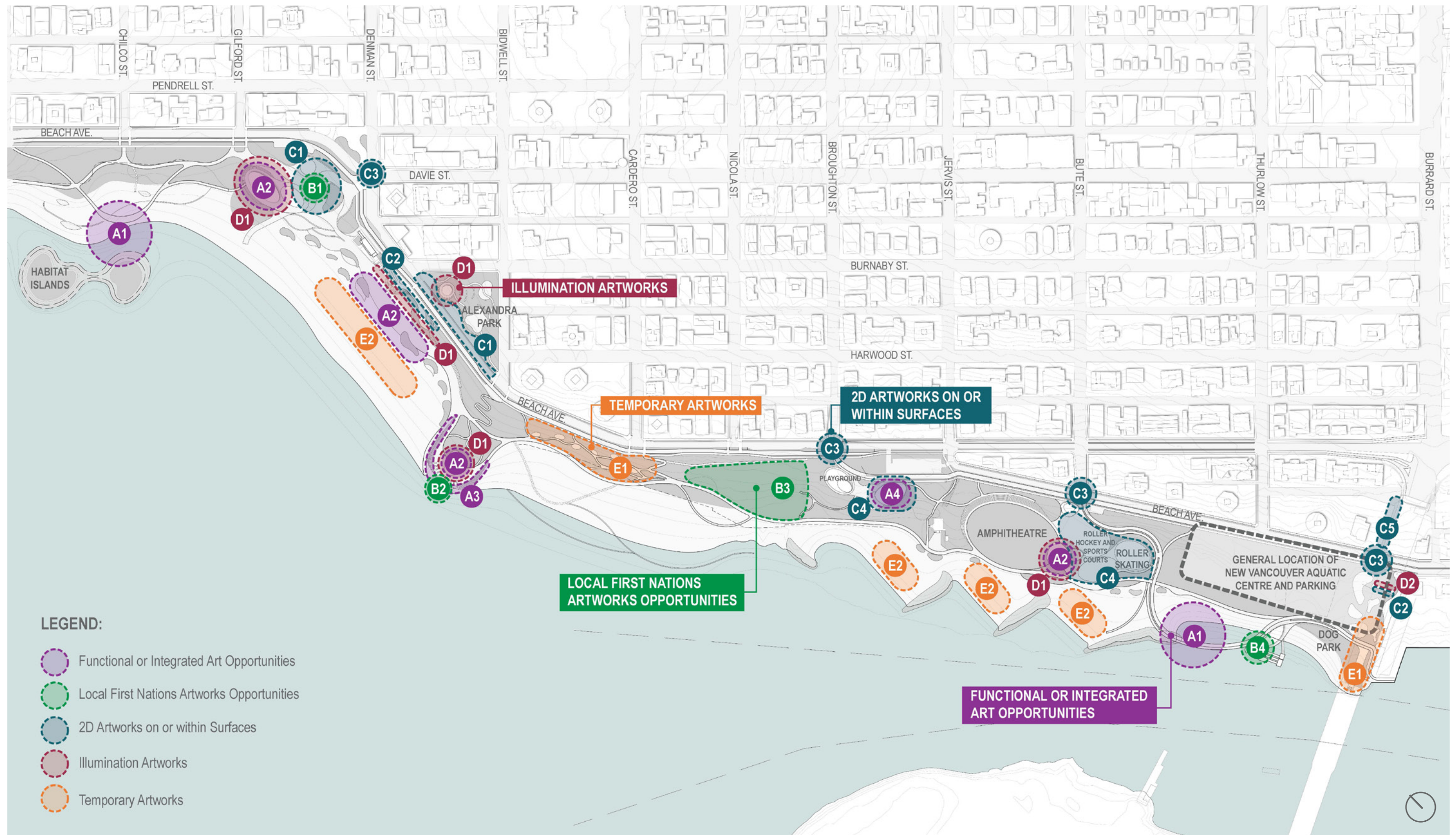
1. Platforms for rotating temporary works within outdoor rooms and gathering spaces. Possible partnerships with the City of Vancouver's "Artist Initiated Works" program could be considered for this opportunity, allowing for artists to have flexibility in the siting of their works within the park for a short term.
2. Beach Shelter Competition: A yearly competition for temporary beach shelters that will draw people to the waterfront and involve them in a new yearly celebration of local or national creativity. This competition could provide an opportunity for young designers and artists to engage with the park and to create their first works.

#### F. Artist Residency

1. A rotating artist residency could be developed within existing or future site buildings to bring cultural production back to the on-site activities on the waterfront.



# FUTURE ARTWORK RECOMMENDATION MAP



**LEGEND:**

- Functional or Integrated Art Opportunities
- Local First Nations Artworks Opportunities
- 2D Artworks on or within Surfaces
- Illumination Artworks
- Temporary Artworks



## 4.6 Lighting

Lighting can play a transformative and meaningful role in creating a positive and inspiring experience for people along the waterfront after dark. This section outlines the lighting goals, vision, and conceptual design for the West End waterfront in alignment with the vision, principles, and goals of the project. This section should be read in conjunction with 'Existing Site Lighting Analysis' document located in the Appendix.

The lighting concept plan will encompass changes that can be made in the short term to enhance the West End waterfront experience, while also providing recommendations for long term transformation. Focus is on the electric lighting for improving the night-time environment, while also looking at lighting control and transition between daytime and night-time.



West End Vancouver by Night (Image © Flickr)



## 4.6.1 Lighting Vision and Strategies

The lighting plan for the West End waterfront will respond to the unique setting and nature of the site. The priority themes already identified for the plan will also be valid for lighting in order to create a set of coherent strategies. The plan will prioritize addressing issues and improving night-time experience of the pedestrians and cyclists. The overarching aim is to create the appropriate ambiances and sequential experiences, and to encourage night-time activity, economy, culture, and human interaction.

### THEMES

The lighting vision focuses on the following priority themes and aspirations that reference the waterfront's unique heritage whilst looking forward to its sustainable future. The lighting approach will focus on the quality of the overall night-time experience and its longevity throughout time and generations.

- Cultural Heritage

The West End is a unique neighbourhood representing different opportunities for reflecting its rich culture and heritage. The lighting scheme will support unique experiences through interaction and be flexible to accommodate changes in long term. Work with the local First Nations to explore how art and technologies can guide lighting to create new wayfinding and focal points in connection with the lighting narrative further described in the following pages.



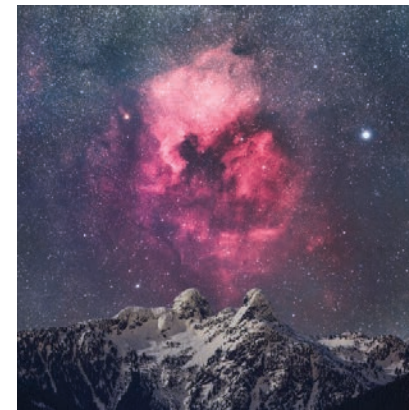
Brockton Point Totem Poles  
- Susan Point, Amongst the People, 2014  
(Image by Coast Salish Arts)



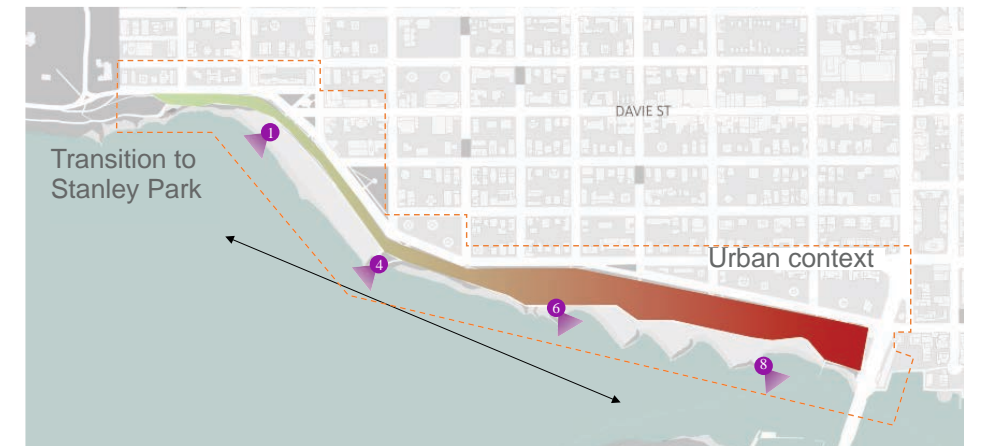
Songs for Reconciliation Project, 2015  
(Image by Brian Lye)



Image source: <https://bark-out.org/news/amending-the-northwest-forest-plan/>



Sch'ich'yuy, Twin Sisters Mountains, North Vancouver  
(Image by Liron Gertsman)



- Unique Location and Context

The West End is one of the most popular destination points for enjoying the sunset in the city. The lighting aspiration is to create a memorable pre-sunset and post-sunset experience while respecting the role of darkness. The lighting will aim to be discrete and subtle in expressing the panoramic vistas of the city.

Increasing nighttime activities in large cities is re-shaping our human and habitat interaction and wellbeing of all. With a growing focus on sustainability and environmental resilience, the plan will prioritize the needs and requirements of both people and the natural environment.



1 From English Bay Beach



4 From Lookout Point



6 To Señákw / sə'ná?qw



8 To Burrard Bridge and Señákw



## OBJECTIVES

The design strategy has been crafted to focus on the following key elements:

- Use light as an essential medium for Reconciliation

xʷməθkʷəy̓əm (Musqueam), Sḵwxwú7mesh Úxwumixw (Squamish), and səliłwətał (Tsleil-Waututh) Nations environmental stewardship reflects the strong connection with land and water during all seasons and times of the day. Based on shared knowledge of traditional lighting technologies, the use of iridescence and glowing materials could be used to support environmental protection goals while providing night time wayfinding. Soft lighting sources enable users to maintain night vision, while also expressing the spirit of the place.

- Provide lighting solutions that support environmental resilience

In 2015, Vancouver City Council adopted a motion “towards enacting a healthy, safe and energy efficient outdoor lighting strategy in order to control harmful outdoor lighting, set standards for outdoor lighting and provide for the designation of dark-sky preserves.” The lighting strategy will aim to support the City’s objective, investigate flexible lighting system infrastructures, consider the value of circular economies to minimize the environmental footprint during its construction as well as its occupancy and use.

- Use light to connect communities with the waterfront

Create an appropriate ambiance and mood, promoting a sense of place and excitement.

- Light as a means of enhancing the wellbeing and mobility

Light will be used as a way of healing; promoting wellbeing of the visitors by prioritizing the quality of light over quantity. Lighting will also ensure a safe circulation throughout the space but stay at minimum required levels when in use and allow for natural darkness to take over when not in use.

- Flexible and adaptable lighting solutions facilitating transformation

Lighting design will support flexible infrastructure in order to adapt to short and long term function and use planned for the space. The preference will be lighting fixtures and control systems which are robust, adaptive, regenerative, and allow a high degree of flexibility for the changing needs.

## PRELIMINARY LIGHTING STRATEGIES

### Environmental Light:

- Light only where needed
- Special spectrum lighting
- Light at lower levels to protect panoramas
- Controlled and seasonal light

### Activating Light:

- Multi-function infrastructure
- Architectural accent / feature lighting
- Pedestrian and recreational bike path safety light
- Permanent art lighting
- Theatrical lighting infrastructure for performances

### Connecting Light:

- Reconciliation / relationship and kinship to design
- Enhance landscape pattern to emphasize the transition
- Take cues from biomimicry
- Use of iridescent materials

DRIVERS



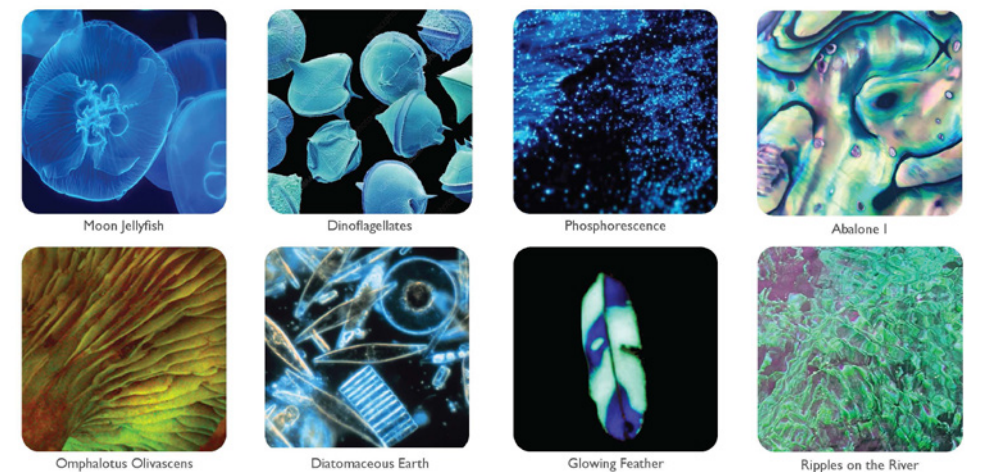
Carrum Foreshore, VIC (Image source: <https://www.klikusa.com/gallery/#>)

SUSTAINABILITY



Light installation Bleibtreustrasse (Image by Gordon Wehowsky, 2013)

EXPERIENCE



Coast Salish iridescent materiality. (Image by Sierra Tasi Baker and Sky Spirit Studio)

INTERACTIVE



# LIGHTING NARRATIVE AND CONCEPT FRAMEWORK

## CONCEPT FRAMEWORK

For pedestrians, the night-time experience is built mostly between a path and an arrival moment. The proposed lighting schemes detailed in the following pages will follow this framework. The path is identified as a series of lighting layers repeated in a certain pattern, either a consistent spacing or highlighting a continuous element. The use of subtle changes in colour and brightness will help to create a wayfinding element and directionality. The end of the road is the arrival moment which is identified either as an interruption of the pattern or the light quality change.

### PATH

Series of light layers repeated in a certain pattern

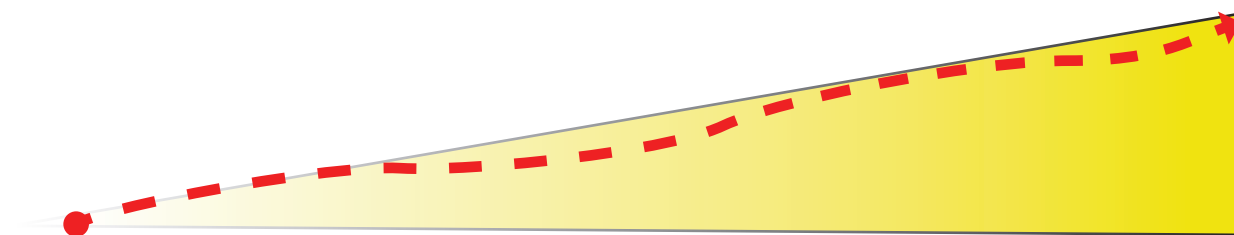


### ARRIVAL

Site specific arrival moment where either light pattern or quality changes



Change in Brightness



Change in Colour Temperature



Image on the left: East Bund Waterfront, Shanghai, China (By of Zilu Wang, Source: <https://www.selux.us/media/pages/products/arc/7b23af0835-1692117509/dark-skybrochure.pdf>)

Image on the right: Winterland atop the Rooftop at Pier 17 (Source: [https://www.manciniduffy.com/wp-content/uploads/2019/05/0230440100\\_N8\\_web1g-e1558705564429.jpg](https://www.manciniduffy.com/wp-content/uploads/2019/05/0230440100_N8_web1g-e1558705564429.jpg))



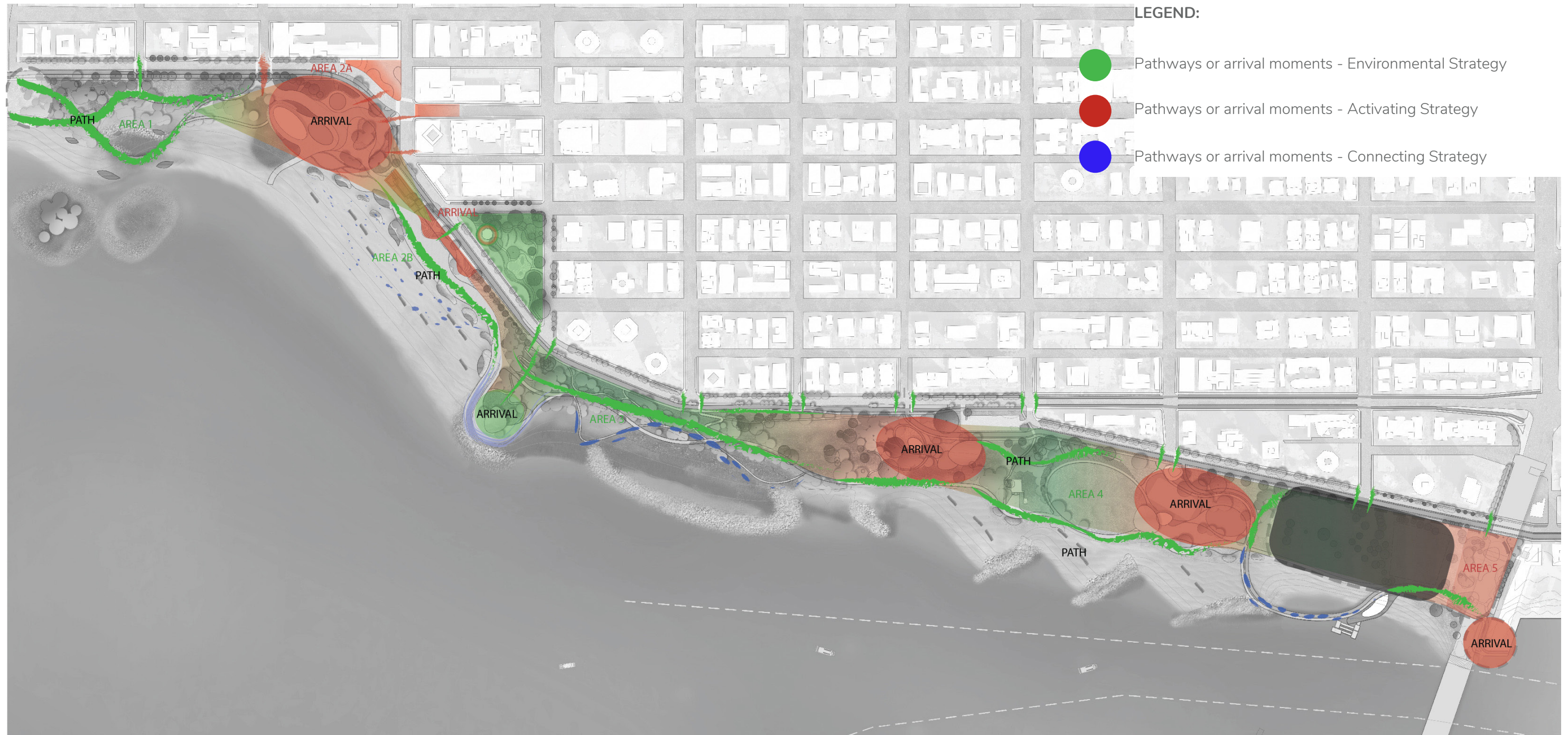
## STRATEGIES FOR PATHWAYS AND ARRIVAL MOMENTS

Pathways generally follow the Environmental lighting strategy due to their adjacency to the waterfront or to meadows / parks. Depending on the pedestrian activity at dusk and night-time, and according to the vicinity to arrival moments, these pathways may also follow Activating or Connecting strategies.

The arrival moments will generally follow the Activating strategy since they represent moments of gathering, social, or recreational activity and interaction. The arrivals will have two layers as shown in the following pages: 1) a functional base layer for every day use for safe circulation and daily activities, 2) an event layer for special occasions and / or events which will provide increase in brightness with moments of additional patterns and colours.

The Connecting strategy is represented in areas where there is a connection to the waterfront. These will be either used as ad hoc pathways or arrival moments in connection with a special event or artistic installation.

The schematic plan below identifies the pathways and arrival moments for lighting and the priority strategies for each area.





## QUALITY OF LIGHT

The quality of light intended in this project will focus on three key elements to create a concept aligned to the strategies identified for the project.

- 1) Quality of Light for Celebrating Natural Environment
- 2) Quality of Light for Reconciliation
- 3) Quality of Light for Protection of Habitat

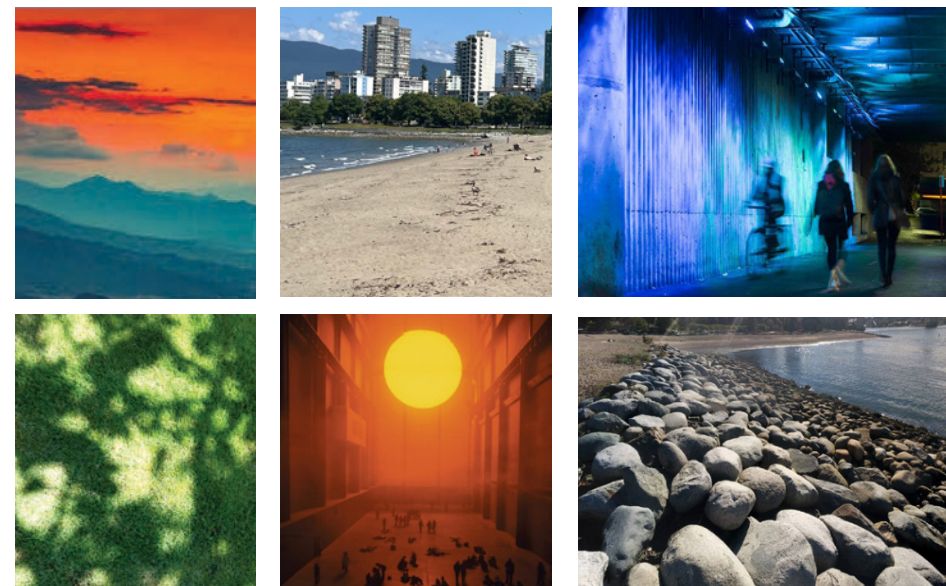


### QUALITY OF LIGHT FOR CELEBRATING NATURAL ENVIRONMENT

Lighting quality on the shoreline is an important tool to reflect the natural sea-land connection. Different lighting distribution and patterns can reinforce water – land connection. Human perception can be supported with careful consideration of fixture types, character of luminaires, quality of light including colour, texture, and mood.

This strategy will focus on:

- Using diffuse light to emphasize softness
- Avoiding high contrasts in transitions between dark and brighter areas
- Aiming for soft transitions between different light levels and scenes throughout the day
- Mimicking nature by using subtle sunset / sunrise colours



## NATURE

## HABITAT

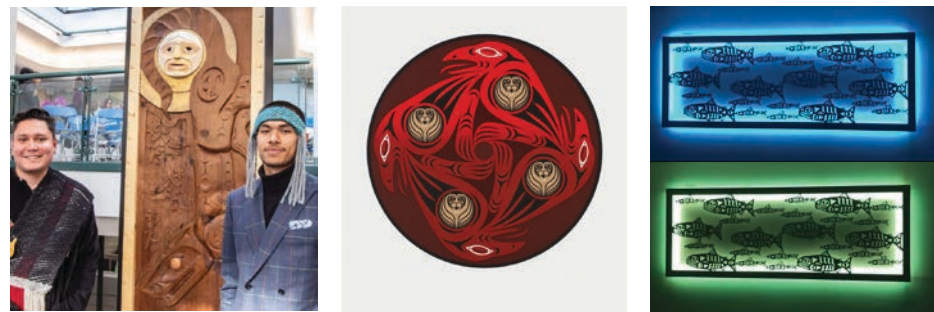


### CULTURAL EXPRESSION



### QUALITY OF LIGHT FOR CULTURAL EXPRESSION

The use of colour in light can create dramatic visual experiences. Through consultation with the local First Nations, possibilities for cultural expression through lighting design will be explored. As part of night-time experiences, change of lighting colour and patterns is recommended to emphasize a special moment and create emotions and connections.



Images above left to right:

- 1) The wolf that raised our people and our grandmother who was gifted to use from Mother Earth, by Jonas Jones (Image source: <https://twnation.ca/tsleil-waututh-nation-and-city-of-burnaby-celebrate-relationship-with-new-public-art-by-artist-jonas-jones/>)
- 2) Susan Point's Four Ravens, a screenprint on paper, was first created in 1994. (Kenji Nagai/Courtesy of Spirit Wrestler Gallery)
- 3) Panel of Knowledge: Tyee Salmon & Eulachon, by Halikium, Wade Baker (Coast Salish)

Images left starting clockwise from top left:

- 1) Image source: <https://wallpapersafari.com/mountain-sunset-wallpaper/>
- 2) English Bay Beach
- 3) Sea Change, North Vancouver (Image by Nic Lehoux)
- 4) Image source: Google Maps streetview
- 5) Olafur Eliasson's Weather Project at the Tate, UK / Studio Olafur Eliasson
- 6) Image source: <https://patternpeople.com/pattern-inspiration-dappled-sunlight/>



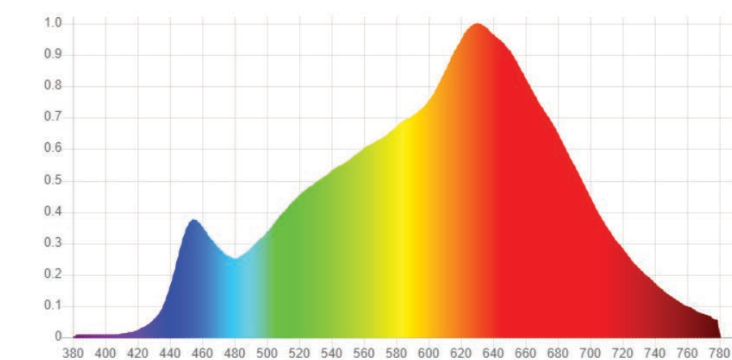
### QUALITY OF LIGHT FOR PROTECTION OF HABITAT

Light colour and spectrum is the result of additive colour mixing - by varying the relative amounts of each colour input, the resulting spectral power distribution (SPD) and chromaticity can be manipulated. A precise custom light spectrum can help optimize the result to protect certain habitats and enhance human health. For areas with the Environmental lighting strategy, it is recommended to use a custom light source with SPD as shown below. Together with the SPD the other parameters to control are:

- Distribution of light output (Photometric Distribution)
- Intensity (measured in Lumen)
- Duration (amount of time in which period of night-time)

### CUSTOM SPECTRAL DISTRIBUTION

#### SPD Result





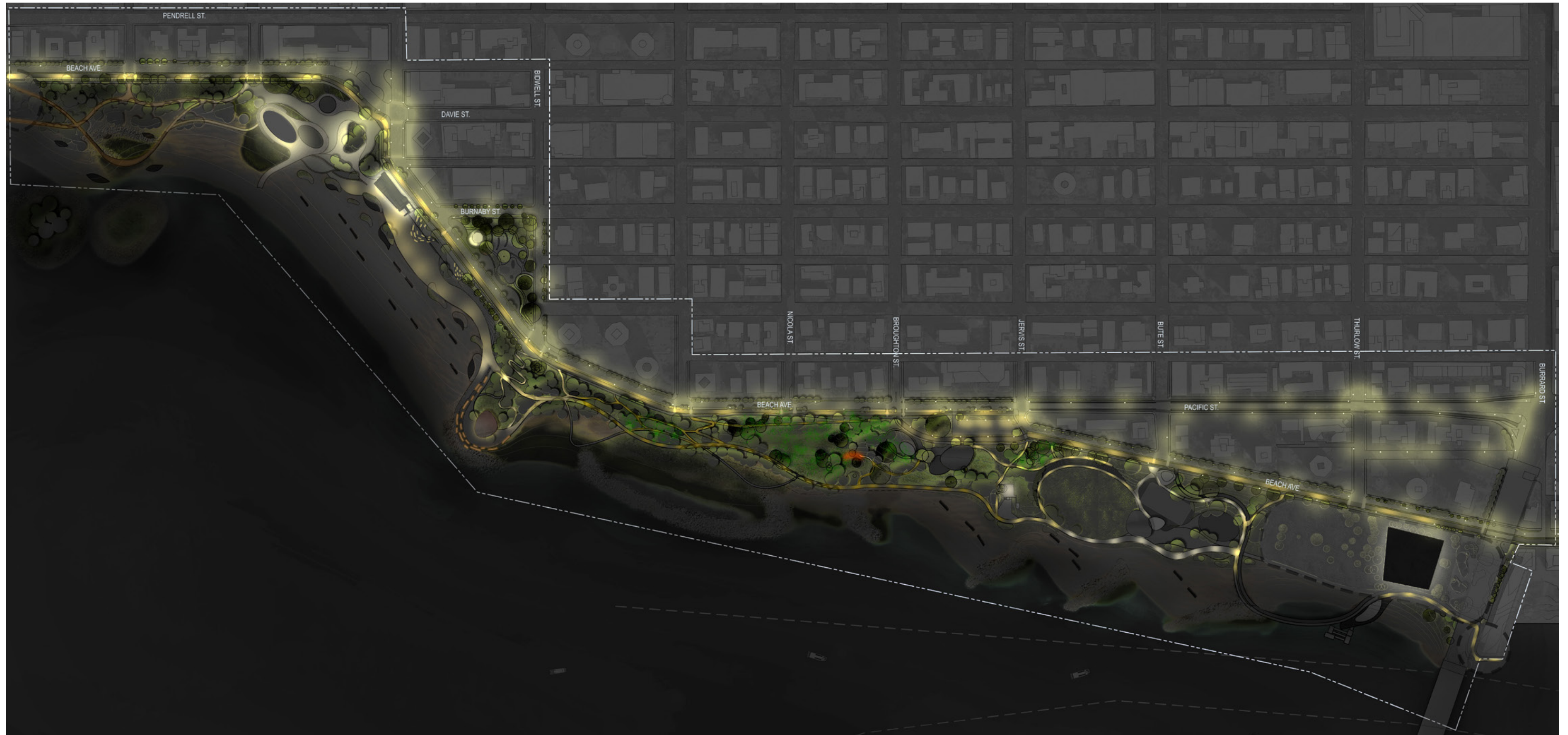
## 4.6.2 Lighting Concepts

### PROPOSED LIGHTING PLAN - FUNCTIONAL LAYER

The following plan schematically represents the functional layer for daily use. This layer will ensure safe circulation for pedestrian walkways and apply a motion sensing control for areas with higher environmental sensitivity. The plazas around pavilions, artworks, restaurants, and cafés will have additional brightness level to emphasize the arrival moments.

All the pedestrian and bike pathways adjacent to or that cross the roadways will have continuous illumination to ensure safety. Lighting at the crosswalks across Beach Avenue and Pacific Streets will follow the design criteria to ensure safety for people walking, rolling, and cycling.

While the proposed plan aims to show the variation in brightness and colour temperature, the representation is only conceptual and cannot be directly translated to actual levels or colour temperatures.



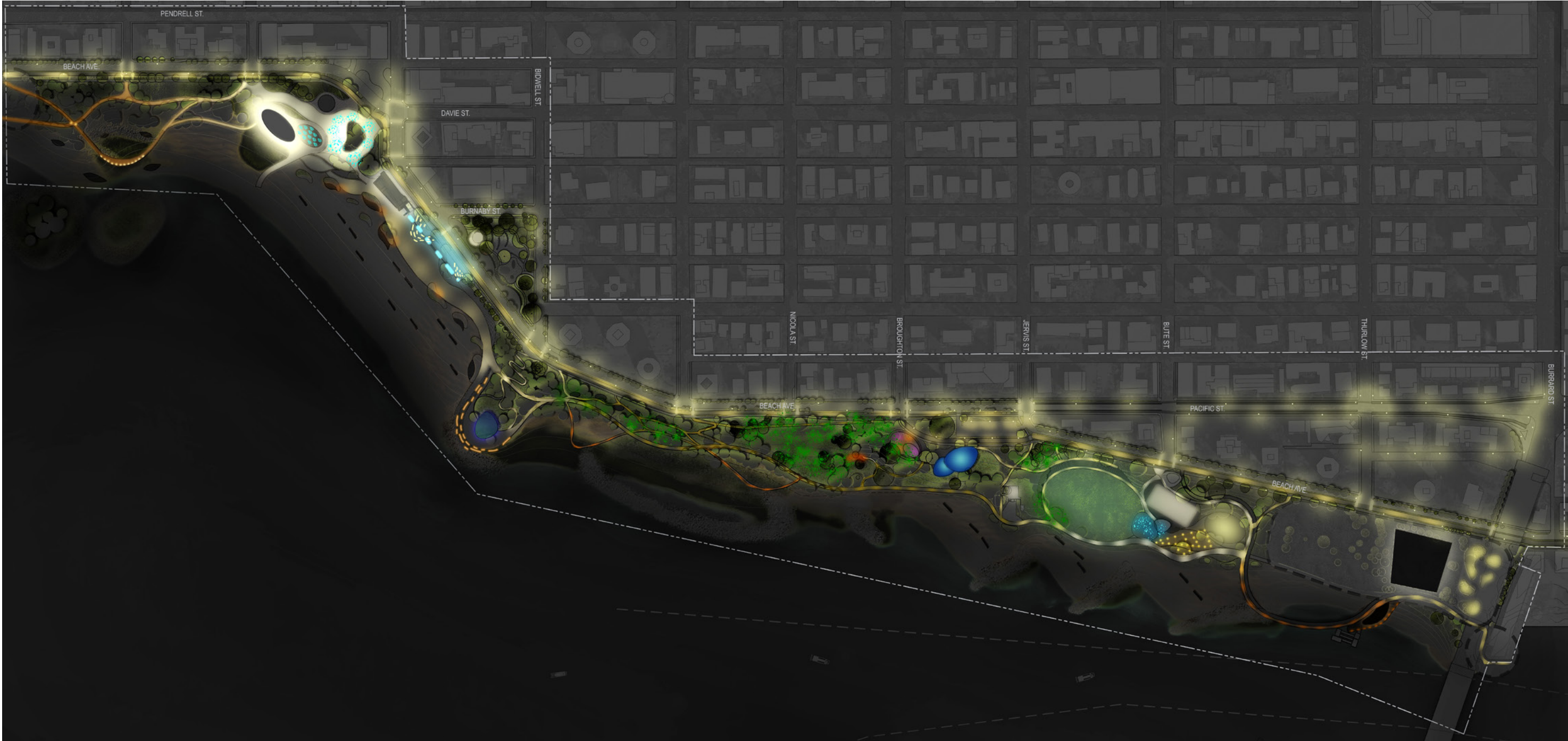


# PROPOSED LIGHTING PLAN - EVENT LAYER

The following plan schematically represents the event or recreational layer with the assumption that all the events throughout the project area are happening at the same time. The event layer is overlaid on top of the functional layer.

In addition to the base layer, the event layer will use brighter scenes with patterns and colours in certain areas such as Morton Park Plaza, the Bathhouse Garden, and Sunset Beach Park Plaza. The artwork and temporary lighting will be more emphasized as arrivals in this layer.

While the proposed plan aims to show the variation in brightness and colour temperature, the representation is only conceptual and cannot be directly translated to actual levels or colour temperatures.





# LIGHTING VOCABULARY

← TO WATER

INTERTIDAL MARSH HABITAT

PARK PLAZA

ELEVATED PATHWAY  
+ VIEWING DECK

WELCOME CENTRE

OPEN PLAZA

COY  
PAV

10m  
8m  
6m  
4m  
2m

Walkways over water with low illumination to protect seaborne wildlife

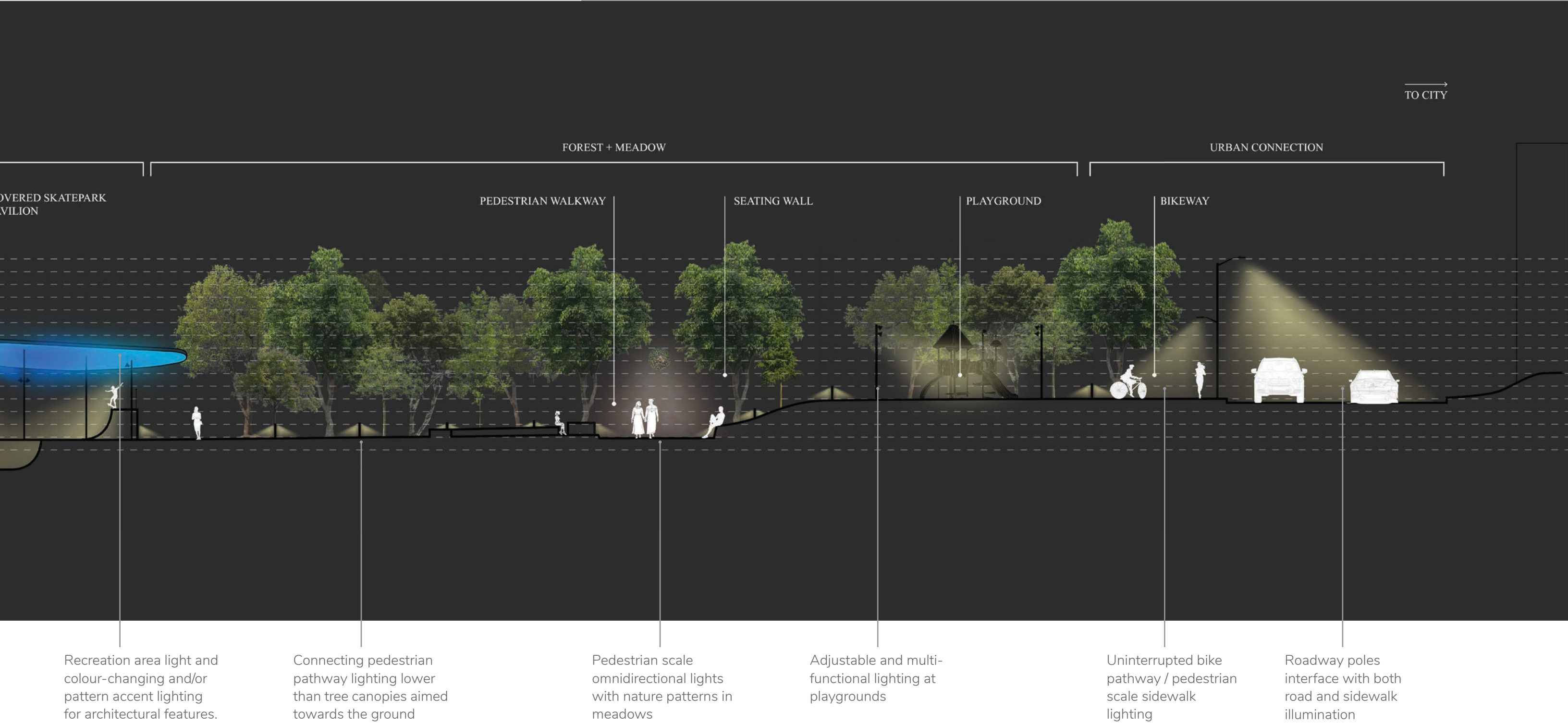
Art projections and architectural feature lighting at vertical canvases

Multi-functional poles for ambient lighting

Decorative and pedestrian scale social gathering lighting



LIGHTING VOCABULARY





## 4.7 Utilities and Services

### 4.7.1 Servicing Plan

The goal of civil infrastructure service is to provide reliable infrastructure that promotes community self-sufficiency, resilience, safety, and protection for the environment today and into the future. Civil infrastructure service considerations include water (watermains, hydrants, fire protection), sanitary sewers and services, and storm sewers and rainwater management. The proposed infrastructure services for West End waterfront will adhere to the following design principles:

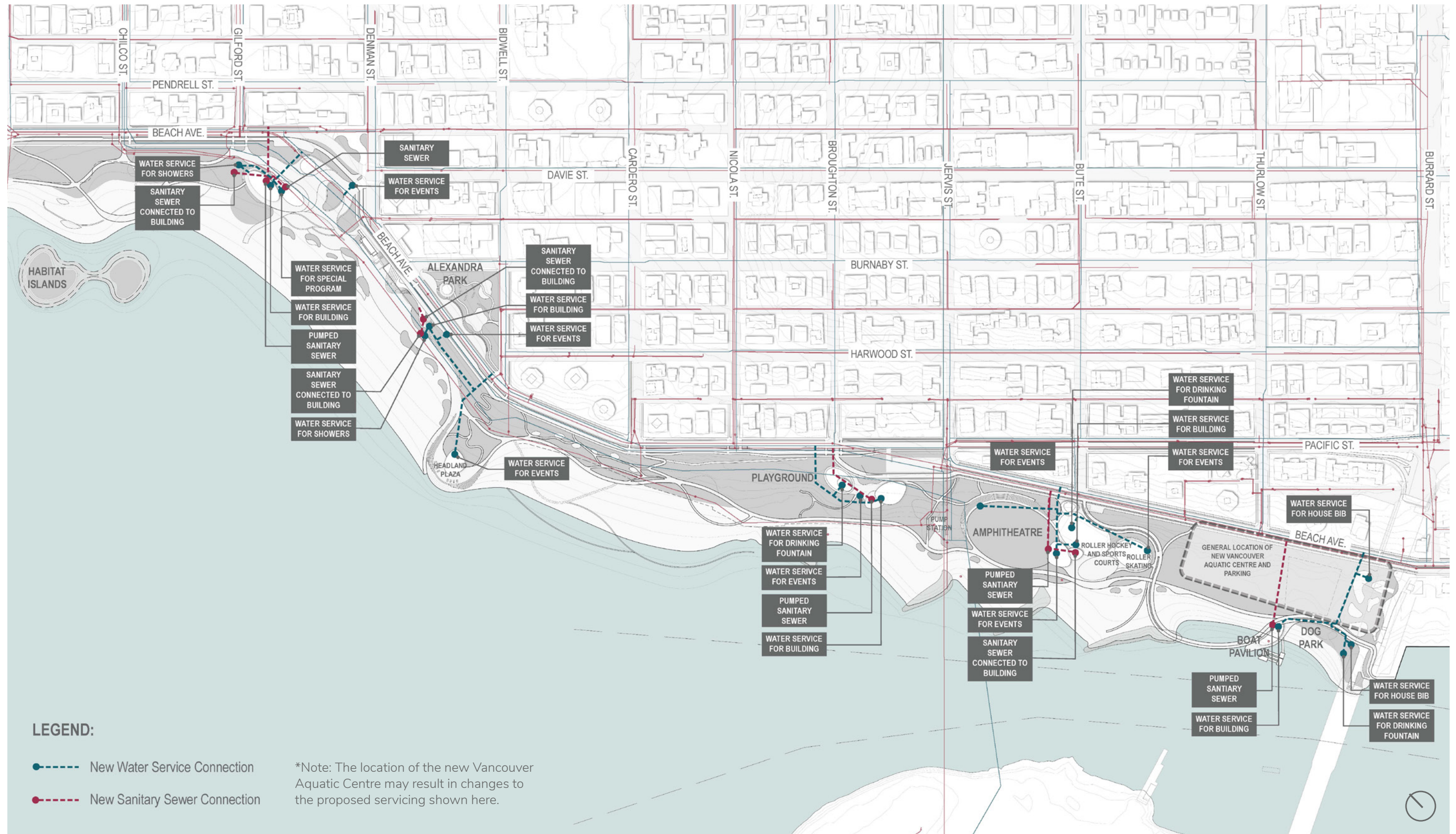
- Provide protection from flooding and other natural risks.
- Provide clean drinking water via underground piped water distribution system to all facilities.
- Provide fire protection and water system redundancy.
- Manage wastewater in underground sanitary sewer mains or pressure mains and related facilities.
- Minimize introduction of new storm sewer outfalls to English Bay by providing storm facilities sized for the major design storm event or grouping storm services where feasible.
- Capture and clean rainwater runoff prior to discharging to the downstream watercourses using bioswales, rain gardens, rainwater tree trenches, green roofs, and other green infrastructure features as per recommendations in the City of Vancouver's Rain City Strategy.

In general, the majority of the West End waterfront area will be serviced by the existing infrastructure (i.e. storm, sanitary, water, and combined sewers) which pass through the existing project site or along Beach Avenue. The servicing methodology is to minimize the connection requirements to the existing City of Vancouver infrastructure along Beach Avenue. The sanitary sewer connections should be grouped together. Where no gravity outlet to the City's system can be provided, green infrastructure may be sized for the 100-year design storm to eliminate the requirement for new outlets to English Bay.

Similarly, the water services should also be grouped together, with new service connections to the existing water infrastructure along Beach Avenue. Rainwater will be managed on site through the implementation of green infrastructure (GI) features. Rain gardens, as the preferred GI implementation, are proposed to treat impervious areas in the park and to treat road right-of-ways in the north-south streets which intersect with Beach Avenue. Where no gravity outlet to the City's system can be provided, green infrastructure should be sized for the 100-year design storm to eliminate the requirement for new outlets to English Bay. Prior to detailed design, the condition and capacity of all existing infrastructure and service connections should be reviewed. Existing services should be used where appropriate.



# SITE SERVICING MAP



## LEGEND:

- - - New Water Service Connection
- - - New Sanitary Sewer Connection

\*Note: The location of the new Vancouver Aquatic Centre may result in changes to the proposed servicing shown here.



## 4.7.2 Park Infrastructure

The West End waterfront will need to operate at a variety of scales, accommodating both everyday smaller informal activities as well as large-scale organized events and programs.

Neighbourhood and city-wide events and performances are a significant feature of the West End waterfront parks and their surrounding streets and contribute to the area's vitality. Ease of event set-up and logistics is one of the factors that event planners will consider when selecting a venue. Therefore, the Vision Plan anticipates that all program and event spaces within the plan are equipped with basic event infrastructure. These include access to water, high-capacity electrical outlets, and pole-mounted event lighting and audio-visual infrastructure. These are envisioned to be an integrated element of the design and utilized to the greatest extent possible, incorporated with other public realm design elements such as seating, canopies, and pavilions, as well as buildings and facilities.

Integrated park infrastructure is also critical for the everyday tending operations and smaller gatherings. These are envisioned at regular intervals throughout the area both within the park and at the Beach Avenue level.

## 4.7.3 Operations and Maintenance

The West End waterfront requires ongoing maintenance of the sandy beaches, enhanced and expanded ecologies, expanded program areas, and facilities such as washrooms. Consideration for access and ease of operations within the park system has been one of the drivers of the design.

Since space comes at a premium in this area, the plan layers the requirements for operation and maintenance activities over other functional elements of the plan such as pathways and plazas. The primary waterfront walkway is designed with a minimum width of 4-5m allowing for vehicular access. The paved plazas within the area allow for set-up and staging for the more involved operations and for turning on an everyday basis. The material of all these pathways and plazas is designed to withstand heavy vehicular traffic.

Storage space included within the proposed new facilities and buildings on site allows for some necessary park maintenance equipment to be stored at multiple locations on site, limiting the need to transport equipment for simple day to day operations. In addition, access to the infrastructure required for tending will ensure maintenance operations can be conducted in a convenient and streamlined manner for the park operations staff. This on-site infrastructure includes access to electricity and water throughout the park system.

Along Beach Avenue, the transportation network design takes into account spaces for support vehicles moving and redistributing the shared bike units and allows for loading access at key locations along the street, primarily in the vicinity of commercial facilities.

It is recommended for each phase of implementation to consider the development of an operation and maintenance manual to ensure the new facilities and more sensitive ecologies are provided with the necessary resources to ensure their success.



# EVENT INFRASTRUCTURE MAP

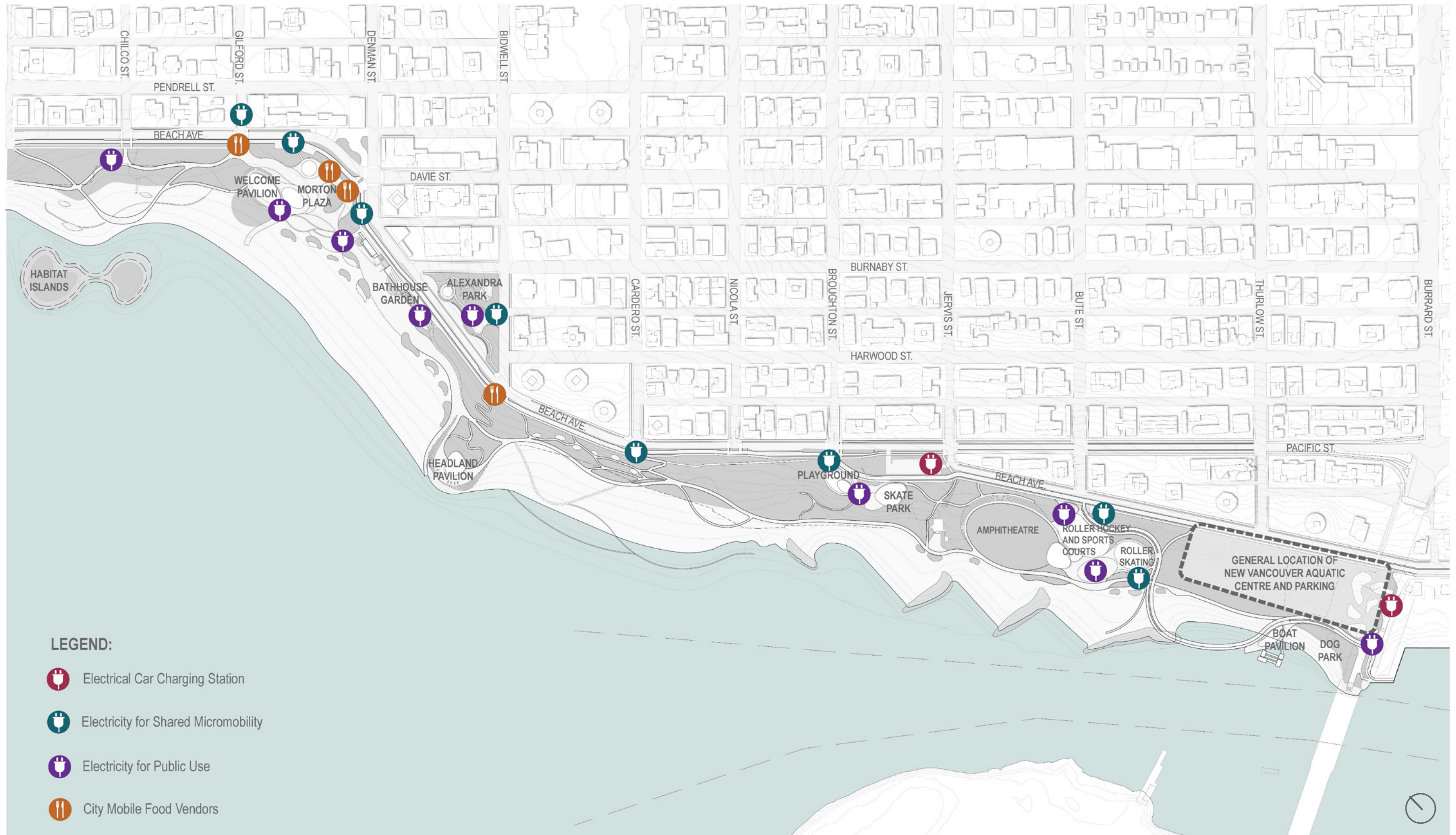


## LEGEND:


-  Water for Events
-  Water for Maintenance
-  Electricity for Events  
(Allow for 3-Phase Power and Generous Amperage)
-  Electricity for Maintenance
-  Lighting for Events  
(Allow for 4 Trail Poles and Controllable RGBW Lighting)
-  Water for Special Programs /  
Dry-bed Water Feature at Plaza
-  Vehicle Access for Maintenance & Operation
-  Vehicle Turnaround &  
Staging Area for Park Operation



# PUBLIC ELECTRICAL INFRASTRUCTURE MAP



**LEGEND:**

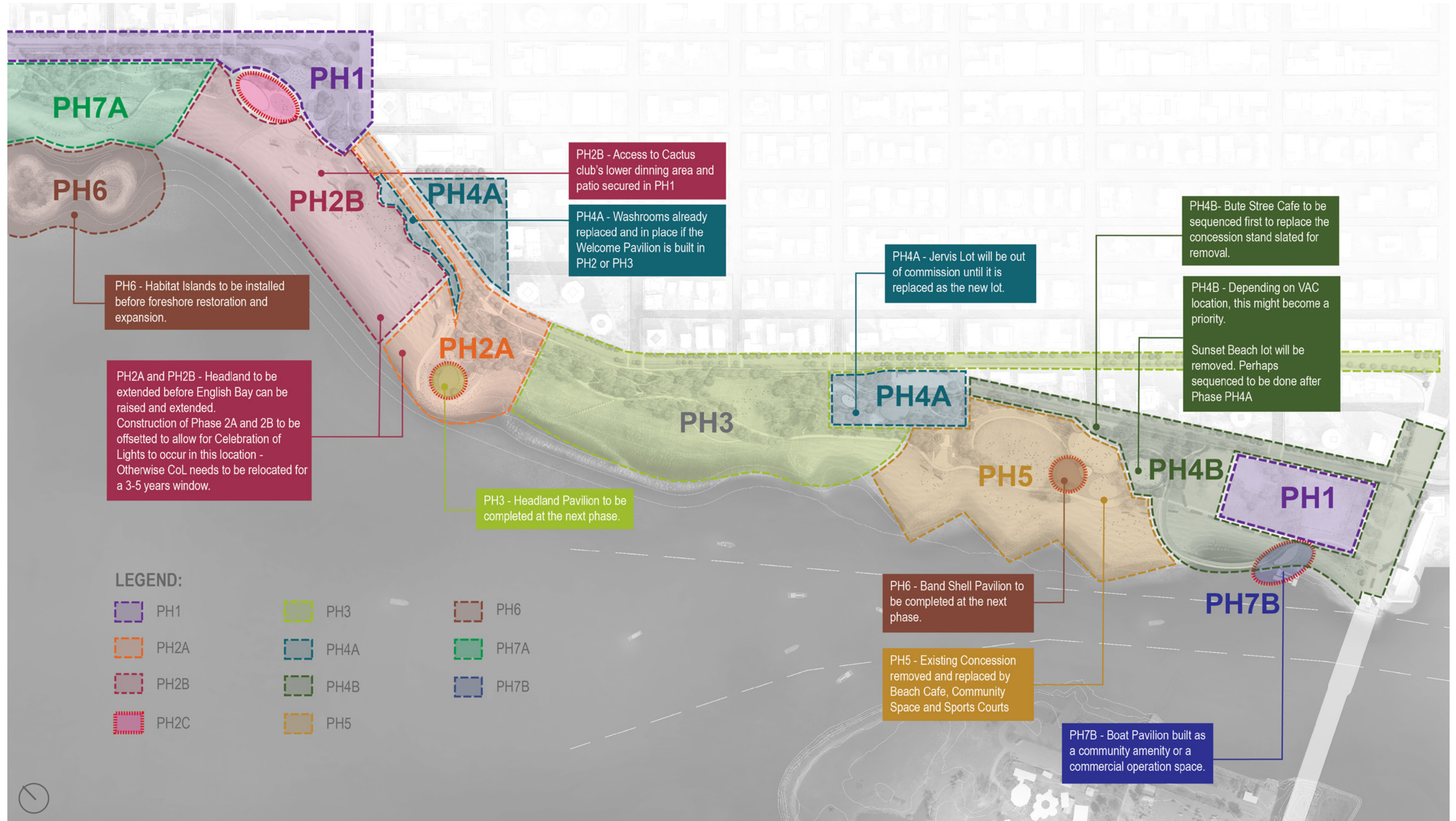
-  Electrical Car Charging Station
-  Electricity for Shared Micromobility
-  Electricity for Public Use
-  City Mobile Food Vendors



# 5.0 IMPLEMENTATION



# 5.1 Phasing Plan





## 5.1.1 Phasing Considerations

*Imagine West End Waterfront* is anticipated to be implemented through multiple phases in the coming decades to 2050 and potentially beyond. The proposed phasing is planned carefully and considers a number of strategic priorities for implementation. These priorities are:

- Advancing Vancouver Park Board’s and City of Vancouver’s Decolonization and Reconciliation work with the local First Nations.
- Creating excitement and garnering support of the plan by delivering needed and highly visible components at the earlier phases.
- Maintaining sea level rise mitigation efforts as one of the primary drivers.
- Ensuring ease of access and construction.
- Sequencing based on service and program continuity and service improvement.
- Sequencing based on delivering programming, activation, and recreational uses.
- Considering commercial opportunities and revenue generation to support future phases and ongoing tending of the constructed spaces.
- Planning according to capital budget cycles.

Phasing of a medium to long range plan such as *Imagine West End Waterfront* is developed based on the information available at the time of developing the plan. The phasing approach and details will remain flexible to respond to the needs and priorities of the time over the next 30 years. It will also be responding to the available resources (capital budget) and opportunities that might present themselves such as partnerships, availability of material, other infrastructure upgrades, etc.

## 5.1.2 Phasing Priorities

### Phase 1

This phase delivers a highly visible component of the plan while addressing an immediate need within the transportation network. As a significant gateway to the waterfront, the intersection of Denman and Davie Streets, known in the plan as Morton Plaza, needs to function efficiently while creating a welcoming environment. The plaza also creates an urban space in proximity to two major commercial corridors in the West End.

Upgrades to Beach Avenue west of Denman Street is also included in this phase, which prepares Beach Avenue for future potential public transit extension to within the Stanley Park by accommodating two-way traffic. It also delivers the permanent Seaside Greenway cycling facility along this stretch.

The Vancouver Aquatic Centre renewal will also take place as part of Phase 1 as a separate project.



Phase 1						
	Description	RoM Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
1.A	Morton Park Plaza - North Half - Hardscape	\$\$	🕒🕒		✓ Contiguous urban plaza, permanent seating and gateway to the beach	✓ South half of Morton Park and English Bay Beach
1.B	Seating and Furnishing	\$	🕒		✓ Park amenity	
1.C	Morton Park Plaza - North Half - Softscape	\$	🕒	✓ Enhanced urban tree canopy	✓ Enhanced urban canopy and green space	
1.D	Denman-Davie Intersection Improvements	\$\$	🕒🕒		✓ Improved pedestrian and cyclist movement and safety	✓ Transition to Beach Avenue East of Denman
1.E	Beach Avenue West of Denman Including AAA Protected Bike Lane	\$\$	🕒		✓ Improved mobility for all modes of transportation	✓ Ready for extension of transit operation (full-size bus service) to Stanley Park
1.F	VAC Renewal	\$\$\$\$	🕒🕒		✓ New Aquatic Centre	

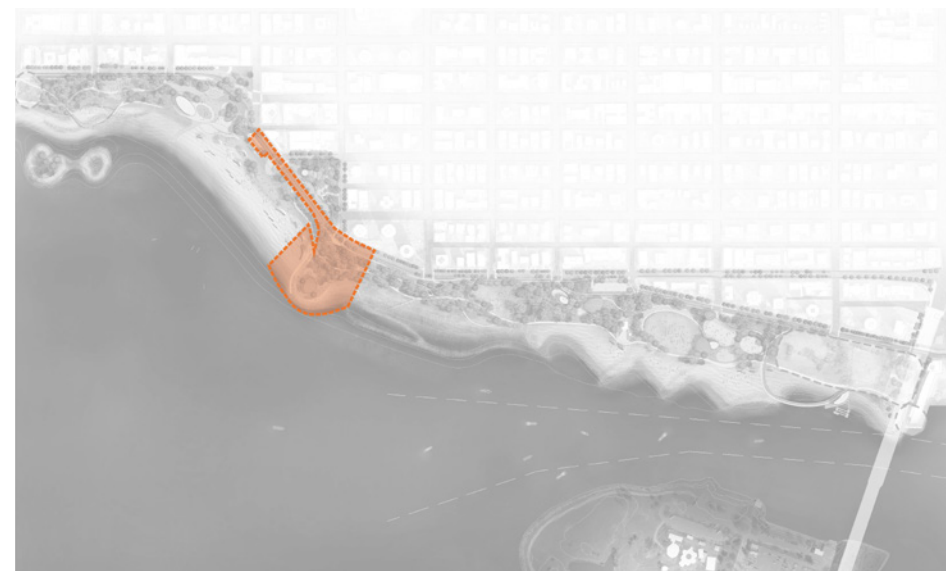


## Phase 2A

Phase 2 includes raising and expanding the headland, which addresses a number of the phasing strategic priorities including advancing reconciliation and decolonization goals, sea level rise mitigation, and increased vitality in form of expanded and programmable park space. In consultation with the local First Nations, this phase necessitates the relocation of the Inukshuk as a step contributing to reconciliation efforts. It also provides space for incorporation of Coast Salish art in consultation with the local First Nations.

This phase is also a significant component of the sea level rise mitigation measures by enabling the expansion of English Bay beach at a subsequent phase. The expanded headland increases the new park space and provides a new programmable space in form of the Headland Plaza, as well as a new ecological node as the headland connects to the rest of the park space. Infrastructure for the future Headland Pavilion will be installed and capped in this phase.

The next section of Beach Avenue upgrades, from Denman Street to east of Bidwell Street will be completed in this phase.



Phase 2A						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
2A.A	Headland - Raise and Extend	\$\$	🕒🕒	✓ Raised and extended headland to protect sandy beach at English Bay and inter-tidal habitat	✓ Expanded park space	✓ English Bay beach expansion to the west, intertidal habitat to the east
2A.B	Headland Plaza and Woodland	\$	🕒	✓ Enhanced urban tree canopy	✓ New gathering space	
2A.C	Headland Amphitheatre Seating	\$	🕒		✓ New gathering and seating area especially for larger events	
2A.D	Park Pathways and Connections	\$	🕒		✓ New connection to Beach Avenue, interim connection to existing paths	✓ Setting up new path connections
2A.E	Beach Avenue Denman to East of Bidwell	\$\$	🕒		✓ Improvements to multi-modal mobility and connections	✓ Setting up the edge conditions for future works at Alexandra Park and the Bath House

\*Rough Order of Magnitude



## Phase 2B

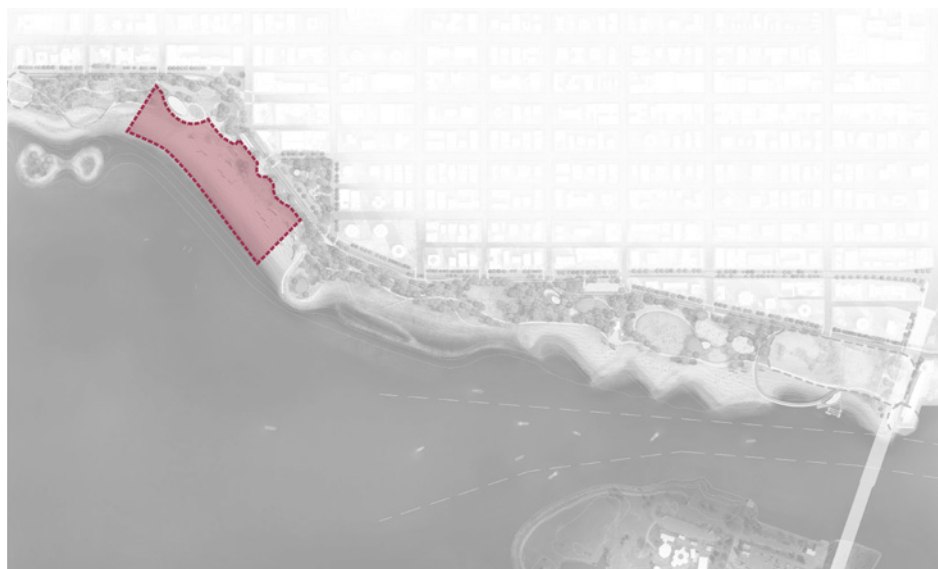
With the expanded headland in place, English Bay beach can be raised and extended to prepare it for the anticipated sea level rise over the next 30 to 80 years. This phase also allows for Morton Plaza to be completed and will prepare the area for the construction of the future Welcome Pavilion. In the meantime, this expanded beach will increase the beach area for the park users in this internationally known destination.

The expanded headland area will also compensate for some spectator area during the Celebration of Light festival should the beach expansion construction coincide with the festival dates.

All infrastructure for the future Welcome Pavilion and the Bathhouse renewal will also be included in this phase.

Phase 2B						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
2B.A	English Bay Beach- Raise and Extend	\$\$	🕒🕒	✓ Raised beach in anticipation of sea level rise	✓ Expanded beach area	✓ Intertidal habitat area to the west
2B.B	Morton Park Plaza - South Half - Hardscape	\$	🕒		✓ New gathering space	
2B.C	Seating and Furnishing	\$	🕒		✓ Park amenity	
2B.D	Morton Park Plaza - South Half - Softscape	\$	🕒	✓ Enhanced urban tree canopy	✓ Enhanced urban canopy and green space	
2B.E	Morton Park and Welcome Pavilion Infrastructure Provisions	\$	🕒			✓ Install underground components to make ready for Welcome Pavilion and event infrastructure

\*Rough Order of Magnitude





## Phase 2C

This phase will add the final components of the Morton Plaza and delivers the Welcome Pavilion and an interactive water feature adjacent to it as a new facility and a new amenity for the beach users and the urban plaza space.

The Welcome Pavilion will also house lifeguard storage and offices as well as bathrooms and changes rooms for public use.

With the underground infrastructure required for the Welcome Pavilion already in place, the building scope can remain discreet and minimize the disruption to the use and enjoyment of the rest of the plaza and beach area.

Phase 2C						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
2C.A	Welcome Pavilion	\$\$\$	🕒🕒		✓ New facility (WCs, change rooms, storage) and new commercial opportunity	
2C.B	Interactive Water Feature	\$	🕒		✓ New park amenity, contributing to the urban plaza vibrancy	

\*Rough Order of Magnitude





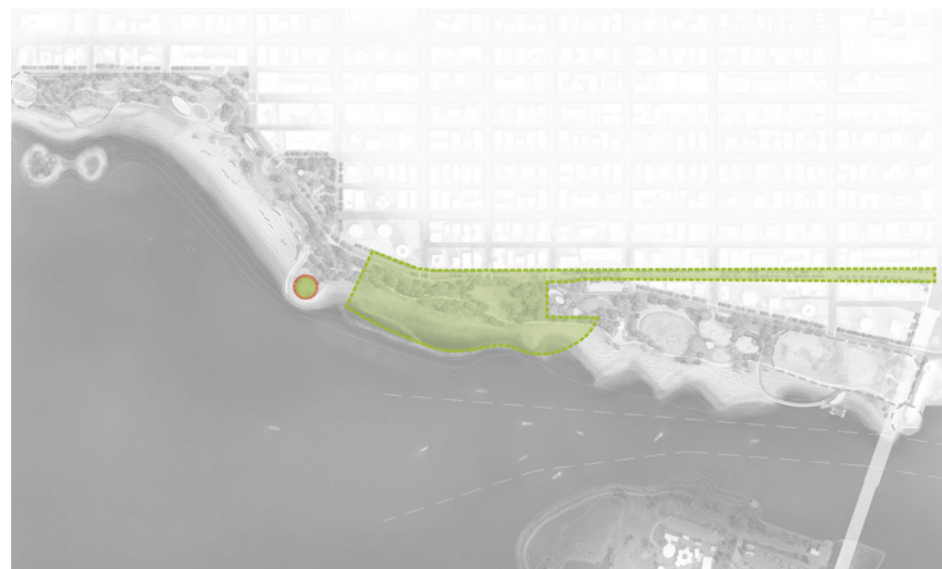
### Phase 3

Phase 3 re-focuses the implementation efforts on sea level rise mitigation and climate change adaptation by the creation of a softened foreshore in place of one of the segments of the retaining wall along the shoreline. This is made feasible by the expanded headland in Phase 2A and by completing the renewal of the English Bay area and the creation of more usable park space while construction in this phase is underway. This phase also delivers enhanced green space in the form of Healing Meadows and a much richer foreshore ecology including salt marshes and enhanced intertidal bi-valve habitat.

The Headland Pavilion will also be delivered as a discreet scope in this phase, offering a new facility and amenity for the park and in support of events.

This phase continues with the improvements on Beach Avenue and completes the upgrades along Beach Avenue from east of Bidwell Street to Jervis Street.

The street and multi-modal mobility improvements in this phase also include the upgrades along Pacific Street and the transition of single-directional bike lanes along Pacific Street to a AAA bi-directional facility along Beach Avenue at Broughton Street intersection.



Phase 3						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
3.A	Foreshore Modification - Cover Existing Retaining Wall	\$\$	🕒🕒	✓ Resilient shoreline in anticipation of sea level rise	✓ Expanded park space	
3.B	Foreshore Modification - Intertidal Habitat Creation and Enhancement	\$	🕒	✓ Resilient shoreline to mitigate storm surge / enhanced intertidal habitat	✓ Teaching and learning opportunities, low-tide path	
3.C	Park Pathways	\$	🕒		✓ Improved connectivity and access	
3.D	Healing Meadows and Tree Canopy	\$	🕒	✓ Enhanced urban tree canopy		
3.E	Small Program Spaces	\$	🕒		✓ New intimate program and gathering spaces within a green setting	
3.F	Headland Pavilion	\$\$	🕒		✓ New outdoor covered event and program space	
3.G	Beach Avenue East of Bidwell to Jervis	\$\$	🕒		✓ Improvements to multi-modal mobility and connections	
3.H	Pacific Street Jervis to Burrard	\$\$	🕒		✓ Improvements to multi-modal mobility and connections	

\*Rough Order of Magnitude

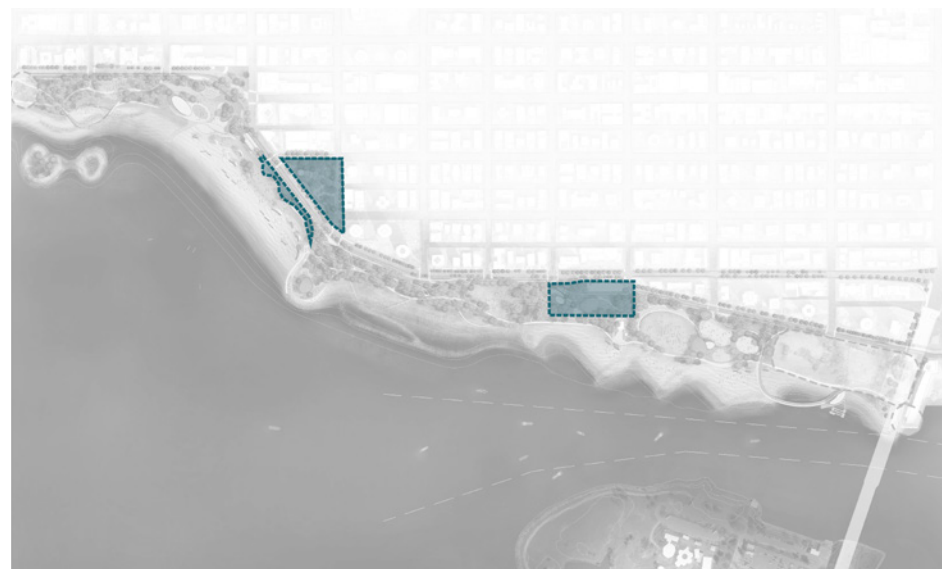


## Phase 4A

Phase 4A is one of the more diverse phases in terms of planned facilities. As one of the final components of the transportation network, this phase includes the new surface parking lot at foot of Jarvis Street to replace Cardero lot (removed in Phase 3) and Jarvis lot which is removed in this phase.

Phase 4 will also deliver significant new program spaces and facilities to the area. A destination skate park, an all ages and abilities playground, and a washroom building will offer new amenities to neighbourhood and regional and international park users. At the same time, interventions within Alexandra Park will ensure that this community park space can function better while maintaining its intimate character.

Other highly visible and major components of this phase are the renewal of the English Bay bathhouse into a re-imagined building and garden space and the repositioning of the Haywood Bandstand. As the work involved in interventions along the Alexandra Park frontage, the bandstand repositioning, and the bathhouse renewal are partially integrated with the Beach Avenue upgrades, road works completed in Phase 2A should consider the needs of this Phase and plan accordingly during design and construction.



Phase 4A						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
4A.A	Jervis Parking Lot	\$	🕒		✓ Replace surface parking removed in this phase and in Phase 3	✓ Allow for removal of Sunset lot
4A.B	Alexandra Park Including Bandstand Relocation	\$	🕒		✓ Additional seating and small natural kids play space, small community performance space	
4A.C	Bathhouse Renewal	\$\$	🕒	✓ Prepare the facility for anticipated sea level rise and flooding, enhanced urban tree canopy	✓ Improved facility (WCs, lifeguard station), community space, seating and viewing space for gathering and events	
4A.D	Skate Park and Skate Park Pavilion	\$\$	🕒		✓ New program currently not on site	
4A.E	Destination Playground	\$	🕒		✓ New program currently not on site	

\*Rough Order of Magnitude



## Phase 4B

With the work on the new Vancouver Aquatic Centre complete, Phase 4B starts the implementation of the proposed design at Sunset Beach by completing a critical mobility connection along the Seaside Greenway route from the underside of Burrard Bridge to the foot of Bute Street and the Bute Street Greenway. This section of the greenway introduces a cycling facility within the park offering a new experience to park users.

At the Beach Avenue level, the new Bute Café offers a food and beverage amenity in preparation for the demolition of the Sunset Beach Concession in the subsequent phase.

This phase will also see the replacement of the Sunset Beach parking lot with a new Roller Plaza that can offer a medium-sized multi-functional space for community programs as well as a dedicated space to the roller skating community.



Phase 4B						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
4B.A	Bute Café on Beach Avenue	\$	🕒		✓ New F&B option and commercial opportunity	
4B.B	Seaside Greenway Through the Park - Including Elevated Portion	\$\$	🕒🕒	✓ Improved shoreline and structure anticipating sea level rise	✓ New cyclist experience, park connectivity	✓ Grading anticipating the future Sunset Beach Café and Sports Courts
4B.C	Rollerskate Plaza and Seating	\$	🕒		✓ Replacing and improving existing use on site	
4B.D	Under Burrard Bridge	\$	🕒		✓ Enhanced community space, small community gathering and program space	
4B.E	Miscellaneous Park Space Adjacent to the New VAC				TBD	

\*Rough Order of Magnitude



## Phase 5

Phase 5 continues with the proposed upgrades and new facilities at Sunset Beach by raising and extending the groynes and sandy beaches.

The biggest component of this phase however is the new plaza, amenity, and sports facility at the foot of Bute Street. This complex will significantly increase the offered programs, amenities, and facilities at this end of the park. These new facilities include a lifeguard station and storage space as well as general storage for the parks and beaches.

Completion of the expanded English Bay beach and Morton Plaza in Phase 1 and 2 will ensure continuity in offering the use of programmable space and sandy beaches during construction at this phase.



Phase 5						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
5.A	Sunset Beach Café and Sports Court	\$\$\$	🕒🕒		✓ New F&B option and commercial opportunity, new park facility (WCs, change rooms, storage), community space, new program not currently on site	
5.B	Sunset Beach Plaza	\$	🕒		✓ Improved gathering and space for everyday and events	
5.C	Festival Lawn and Amphitheatre	\$\$	🕒🕒		✓ Replacing and improving existing use on site, amphitheatre seating as new park amenity	
5.D	Raised Groynes and Sandy Beaches			✓ Protection of beach area to the greatest extent possible in anticipation of sea level rise, improved intertidal habitat		
5.E	Miscellaneous Park Space Adjacent to the new VAC	\$	🕒		TBD	

\*Rough Order of Magnitude



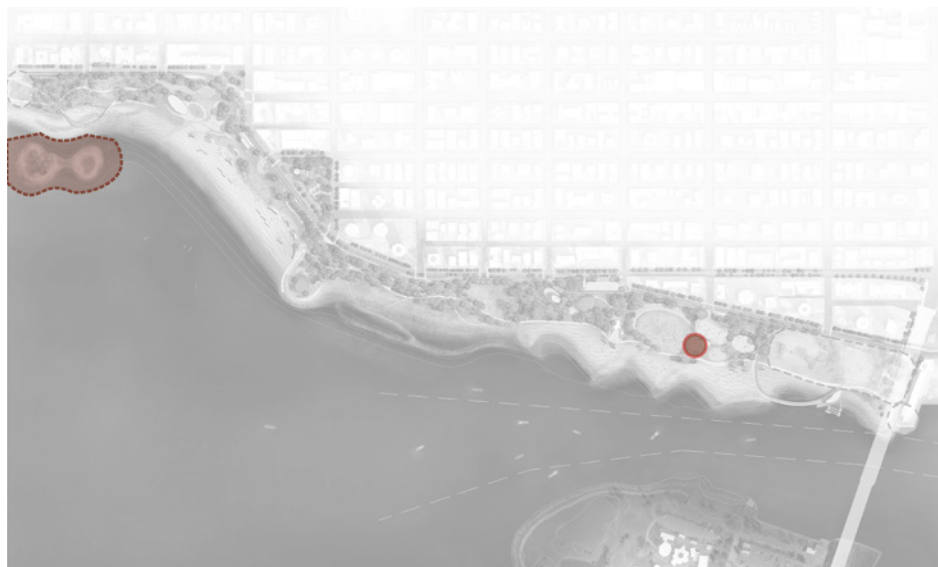
## Phase 6

Phase 6 as one of the final stages of implementation refocuses on the sea level rise mitigation and climate change adaptation efforts. Two proposed habitat islands will be construction in this phase. This work is also required as enabling work for the completion of the foreshore modifications at the western end of the site.

As an option, the Bute Bandshell Pavilion can be constructed as a discreet scope as a part of this phase providing a new amenity.

Phase 6						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
6.A	Habitat Islands	\$\$	🕒🕒	✓ Protection from storm surge and wave action, enhanced wildlife and foreshore habitat		✓ Providing protection for the foreshore and inter-tidal habitat in Area 1
6.B	Bute Bandshell Pavilion	\$\$	🕒		✓ New covered outdoor event space with infrastructure to set up a performance stage	

\*Rough Order of Magnitude





## Phase 7A

Phase 7A completes the foreshore modifications along the waterfront by replacing the second segment of the vertical retaining wall present on site with a softened shoreline, perched beaches, and salt marshes. This phase will also introduce a completely new amenity and experience to the park users by delivering an elevated walkway and intertidal platform over the salt marsh and intertidal habitat areas.

The habitat islands constructed during the previous phase will protect this new foreshore habitat area and marine structure (elevated walkway) from storm surges and wave action.

Phase 7A						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
7A.A	Foreshore Modification - Cover Existing Retaining Wall	\$\$	🕒🕒	✓ Resilient shoreline in anticipation of sea level rise		✓ Providing protection for the foreshore and inter-tidal habitat in Area 1
7A.B	Foreshore Modification - Intertidal Habitat Creation and Enhancement	\$\$	🕒	✓ Resilient shoreline to mitigate storm surge / enhanced intertidal habitat	✓ Teaching and learning opportunities	
7A.C	Elevated Walkway	\$	🕒🕒		✓ New pedestrian experience and park amenity	
7A.D	Park Pathways and Enhanced Woodland Ecology	\$	🕒	✓ Enhanced urban tree canopy		

\*Rough Order of Magnitude



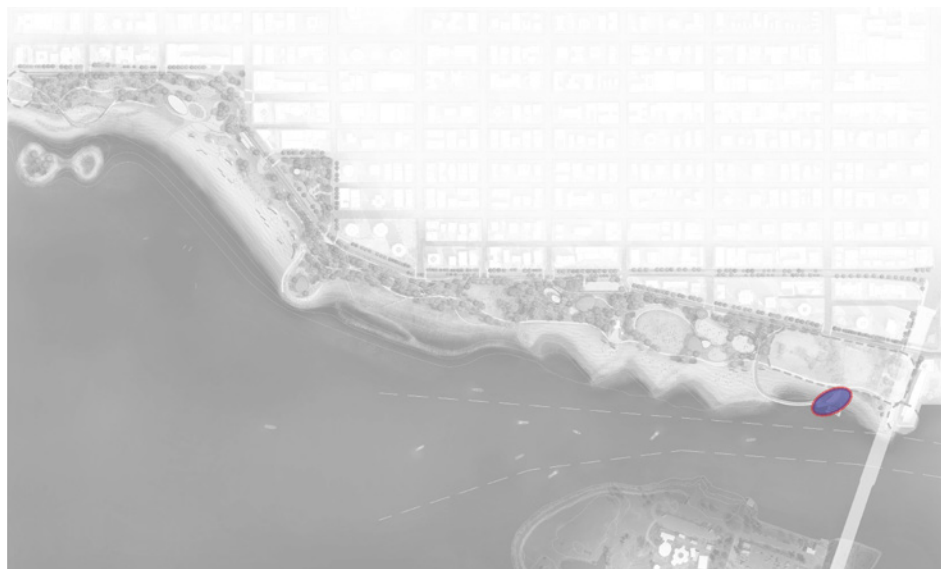


## Phase 7B

The final phase of the project will see a discreet scope in the form of a new facility at the east end of the site. The Boat Pavilion as a new community space or commercial operation will be the last of the proposed new facilities on site.

Phase 7B						
	Description	RoM* Cost	Complexity / Duration	Contributing to Sea Level Rise Mitigation / Climate Change Adaptation	Providing Additional Services, Facilities, or Programs	Enabling Work for Subsequent Phases
7B.A	Boat Pavilion	\$\$	🕒🕒		✓ New community space and potential commercial opportunity	

\*Rough Order of Magnitude





# 5.2 Waste Diversion

## 5.2.1 Considerations

In order to minimize the quantity of waste sent to the landfill, the following high level inventories are provided with suggestions for reuse or recycling. These are meant to be read as an overview; a surveyed and quantified study should be done prior to construction in order to best strategize around phasing and reuse.

Early in the process, an on-site staging or laydown area should be identified as well so that materials to be reused can be coordinated between phases.

## 5.2.2 Strategies

### Phase 1

PHASE 1			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	flagpoles		relocate
	dedicated benches		relocate
Hardscape	concrete curb		reuse or crush for fill
	concrete sidewalk		crush for fill
	crushed stone		reuse at relocated Amaze-ing Laughter
Softscape	woody shrubs		community giveaway transplant offsite
	perennials, sod		compost
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes.  salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
Utilities	street lights		relocate or recycle

Ph 1 Special considerations:

- This Phase consists of two locations at either end of the project site. Despite the separated locations, investigate ways in which demolition and waste diversion strategies can be shared between the sites.
- Demolition at the Vancouver Aquatic Centre site is not included in the table above as this will be executed as a separate project. However, it is possible that this site will yield a considerable amount of both cut and fill; if the Aquatic Centre site does not self-balance in that regard, consider utilizing excess fill in other areas of the park.
- Similarly, consider all aspects of adaptive reuse / renovation / demolition of the existing Vancouver Aquatic Centre and how the materials might be reused, recycled, or otherwise diverted from landfills.

### Phase 2A

PHASE 2a			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	beach logs		reuse on site after beach replenishment shred for mulch compost
	dedicated benches		relocate
Hardscape	concrete sidewalk		crush for fill
	stone pavers		reuse on site; crush for reuse as crushed stone paving
Structural	Inukshuk foundation		leave in place as fill or headland structure foundation
	stone, riprap edge		reuse in place or elsewhere on site as riprap edge or within gabion structure
Softscape	woody shrubs		community giveaway transplant offsite
	sod		compost
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes.  salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
Utilities	street lights		relocate or recycle





## Phase 2B

PHASE 2b			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	beach logs		reuse on site after beach replenishment
			shred for mulch compost
	dedicated benches		relocate
Hardscape	concrete sidewalk		crush for fill
	stone, riprap edge		reuse in place or elsewhere on site as riprap edge or within gabion structure
Softscape	sand		reuse in place or elsewhere on site for beach replenishment
Utilities	lights/poles		recycle

## Phase 2C

PHASE 2c			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	bike racks		relocate on or off site
	dedicated benches		relocate
Hardscape	concrete curb		reuse or crush for fill
	concrete sidewalk		crush for fill
	asphalt bike path		recycle
	crushed stone		reuse at tertiary paths
	cobble buffer strip		reuse in place or elsewhere on site as riprap edge or within gabion structure
Structural	stone wall/planters		salvage for paving/flooring; use within gabion structure crush for fill
	globe light foundation		crush for fill
Utilities	globe lights		relocate to new site entry locations

## Phase 3

PHASE 3			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	parking lot gates		relocate off site; recycle
	metal rail		recycle
	dedicated benches		relocate
Hardscape	concrete curb		reuse or crush for fill
	concrete sidewalk		crush for fill
Softscape	sod		compost
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes. salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
Structural	stone, riprap edge		reuse in place or elsewhere on site as riprap edge or within gabion structure
	stone block seawall		combine with rip rap for softened shoreline edge; stack for beach access steps; use for seating; crush for fill

Leave in Place

Relocate On Site

Relocate Off Site

Reuse (downgraded)

Recycle

Compost

Donate



## Phase 4A

PHASE 4a			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	metal fence and railings		recycle
	Esmond Lando Plaza benches		relocate to Alexandra Park
	dedicated benches		relocate
	parking meters		relocate offsite
	chain link fence		recycle
Hardscape	concrete curb		reuse or crush for fill
	stone curb		reuse as curb or within gabions, or crush for fill
	asphalt bike path		recycle
	concrete sidewalk		crush for fill
	cobble buffer strip		reuse in place or elsewhere on site as riprap edge or within gabion structure
	stacked slope retaining units		crush for fill
Softscape	sod		compost
	woody shrubs		community giveaway transplant offsite
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes. salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
	stone wall/planters		salvage for paving/flooring; use within gabion structure crush for fill
Structural	concrete retaining walls		crush for fill
	concrete stairs		crush for fill
	railing, façade interiors		salvage as attic stock for future boathouse reuse plumbing fixtures and other consider giveaway or fundraiser with salvaged pieces of heritage building recycle

## Phase 4B

PHASE 4b			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	parking lot gates		relocate off site; recycle
	dedicated benches		relocate
	EV charging station		relocate off site
	metal rails and bollards		recycle
Hardscape	concrete curb		reuse or crush for fill
	concrete sidewalk		crush for fill
Softscape	sod		compost
	woody shrubs		community giveaway transplant offsite
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes. salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
	sand		reuse in place or elsewhere on site for beach replenishment
Structural	concrete retaining walls		crush for fill
	concrete stairs		crush for fill

## Phase 5

PHASE 5			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	beach logs		reuse on site after beach replenishment shred for mulch compost
	dedicated benches		relocate
	concrete sidewalk		crush for fill
Structural	stone wall/planters		salvage for paving/flooring; use within gabion structure crush for fill
	stone, riprap edge		reuse in place or elsewhere on site as riprap edge or within gabion structure
Softscape	woody shrubs		community giveaway transplant offsite
	sod		compost
	trees		mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes. salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
	sand		reuse in place or elsewhere on site for beach replenishment
Concession Stand Demo	stone cladding		consider for reuse as specialty paving
	plumbing fixtures, doors, and other reuseable elements		reuse off site or back of house at new facilities
	metal railings, fixtures, roofing		recycle

Leave in Place

Relocate On Site

Relocate Off Site

Reuse (downgraded)

Recycle

Compost

Donate

















## Phase 6

PHASE 6
N/A



Ph 6 Special considerations:

- No deconstruction or salvage for consideration.
- Consider other nearby construction / demolition projects as sources for fill and other materials.

## Phase 7a

PHASE 7a			
Category	Item	Waste Diversion Strategies	Notes
Furnishings	beach logs	  	reuse on site after beach replenishment shred for mulch compost
	dedicated benches		relocate
Hardscape	concrete sidewalk		crush for fill
Structural	stone block seawall		combine with rip rap for softened shoreline edge; stack for beach access steps; use for seating; crush for fill
	stone, riprap edge	 	reuse in place or elsewhere on site as riprap edge or within gabion structure
Softscape	sod		compost
	trees	 	mature (greater than 30cm DBH and transportable) native cedar, maple or Douglas fir specimens that must be removed should be offered to the Local First Nations for cultural or other purposes. salvage for carved furnishings, building cladding, interior finishes shred for mulch
	soil		strip and stockpile, test and blend with organics to restore for reuse
	sand	 	reuse in place or elsewhere on site for beach replenishment

## Phase 7B

PHASE 7b			
Ferry Dock Demo	floating dock, connecting ramp, railings	 	reuse off site; recycle

 Leave in Place

 Relocate On Site

 Relocate Off Site

 Reuse (downgraded)

 Recycle

 Compost

 Donate